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Headquarters

1201, Connecticut Avenue, N. W.
WASHINGTON 6, D. C.
Tel. EXEcutive 7760
Cable Address: FOODAGRI - WASHINGTON

The FAO European Regional Office

Villa Borghese - ROME
Tel. No. 361,251
Cable Address: FOODAGRI - ROME
Bank: American Express Co.

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FOR EUROPE:

19.84 M. (15,120 KC/S)
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SLOVAK	15.00-15.15
POLISH	15.15-15.30
HUNGARIAN	15.30-15.45
SERBO-CROAT	16.50-17.05
FRENCH	17.25-18.00
TURKISH	18.00-18.30

25.40 M. (11,810 KC/S)
AND
31.15 M. (9,630 KC/S)

GERMAN	19.05-19.40
ENGLISH	20.10-20.45
GREEK	20.45-21.15
RUMANIAN	22.15-22.30
RUSSIAN	22.30-22.45
CZECH	22.45-23.00

FOR SOUTH AND NORTH AFRICA:

25.40 M. (11,810 KC/S)
AND
31.15 M. (9,630 KC/S)

ITALIAN	19.40-19.55
ENGLISH	19.55-20.10
ARABIC	21.15-21.45

FOR NORTH AMERICA:

25.40 M. (11,810 KC/S)
AND
31.15 M. (9,630 KC/S)

ENGLISH	01.30-02.15
ITALIAN	02.15-02.55

FOR SOUTH AMERICA:

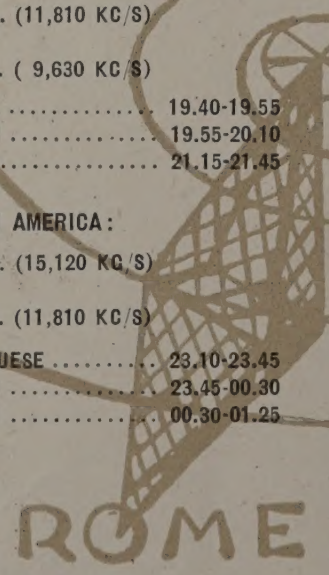
19.84 M. (15,120 KC/S)
AND
25.40 M. (11,810 KC/S)

PORTUGUESE	23.10-23.45
SPANISH	23.45-00.30
ITALIAN	00.30-01.25

FOR FAR EAST:

19.84 M. (15,120 KC/S)
AND
25.40 M. (11,810 KC/S)

ITALIAN	11.00-11.05
ENGLISH	11.20-11.30



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FOOD AND AGRICULTURE

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July — September 1949

SECOND YEAR

QUARTERLY PUBLICATION OF THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

SUMMARY

Edited by the Information Service of FAO Rome

GRASSLAND IN DENMARK

by **HENRY FREDERIKSEN**

Adviser to the Grassland Section of the Federatio
of the Agricultural Societies of Jutland

Of Denmark's aggregate agricultural area, about 3,110,000 ha. slightly more than 1,200,000 ha. are devoted to grass and green fodder crops.

Denmark's grass areas have been considerably reduced during the last generation. In 1881 the grass area amounted to 48 % of the total agricultural area, but in 1948 it had fallen to only 38 % The area devoted to roots has been extended from 2.2 % to 18.7 % in the same period and the fallow area has declined from 9.1 % to 0.3 % The area devoted to grain crops has been rather constant, around 40 %.

As Danish agriculture must probably for a long time ahead, and to a still higher degree than formerly, be based on the sale of high class animal products, it is improbable that the grass areas will undergo a further reduction.

Of the 1,200,000 ha. grass area about 65 % form part of the rotation; perennial grass fields amount to about 30 % and commons and rough grazing along the seashore etc. to about 5 %.

The 8-year rotation is the most common form of cultivation in Denmark with 2-year grass fields. One-year grass fields are rather frequent in Sealand, Funen, Laaland-Falster and Eastern Jutland. In Jutland, and particularly in the northern and western districts with comparatively low-lying land and heavier precipitation than in the rest of Denmark, grass fields of 3 years and more are rather common. Actual permanent grass fields are of rare occurrence, and only on humus soil. The area devoted to lucerne has decreased heavily and amounted to only 18,500 ha. in 1948. The area devoted to green fodder has always held a modest place in the cultivation, and has been fairly constant, around 8,000 ha.

According to the computations made by the Statistical Department, the harvest yield has risen from 1,560 Feed Units per ha. in 1876-80 to 3,500 Feed Units in 1944-48. A feed unit (F.U.) or ' barley unit ' is the unit of nutrition used in Denmark and other northern countries as a measure of the feed value of the different feeding stuffs and feeding mixtures. The term ' F.U. ' means the feed value of 1 kg. of barley, 1 kg. of wheat or rye, 1.2 kg. of oats, 1.0 kg. of potato dry matter, 1.1 root dry matter, 2.5 kg. of hay or 5 kg. of straw.

The doubling of the yield of the grass fields from 1870 to this day is the result of an intense and excellent collaboration between breeders, experimenters, advisers and agricultural practitioners.

The first actual systematic examination of grass fields in Denmark was undertaken by the agricultural adviser P. Nielsen in the seventies. P. Nielsen's botanical analyses of the composition of the various plants in the fields with mixed grasses became of fundamental importance to the later examinations of Denmark's grass fields and grass field cultivation. The seed mixtures prepared by him were composed of many different varieties and were for many years the basis of the sowing of the grass fields. The experiments and examinations undertaken by P. Nielsen have been continued and extended by the Government Experimental Stations for Plant Culture, the local experimental stations and the special grass field sections.

The Section for Grass Field Cultivation of the Federation of the Agricultural Societies of Jutland, established in 1919, has thus since

1921 controlled the yield of the grass fields of a considerable number of farmers on the basis of the feed consumption and animal production. These examinations have shown, among other things, that the average yield in the controlled farms has gone up from 2,589 F.U. per ha. in 1921-24 to 4,571 F.U. per ha. in 1939-48. The variation in the yield is considerable both from year to year and from one farm to another. In the good grass year 1945 the yield varied from 4,025 F.U. to 9,345 F.U. per ha. Average 5,512 F.U. per ha. In the unusually poor grass year 1947 the yield varied from 1,934 F.U. to 3,924 F.U. per ha. average 2,971 F.U. per ha.

By way of illustration of the yield of the most common types of grass fields on well-tilled soil in Denmark, the following may be stated.

	F. U. per ha.
Grazing fields on humus soil.	5,900
Grazing fields on mineral soil	5,200
1–year rotation grass fields	4,700
2– year rotation grass fields	3,900

The primary aims in Danish grass field cultivation is to increase the grass production, to make it more even and less dependent on the weather, on diseases and on attacks by pests etc. than hitherto.

Improved manuring has doubtless contributed greatly to the increased yield, but as by far the greatest number of grass areas in Denmark are one or two year fields in which red clover should be predominant, in any case during the first year, and as it is endeavoured to make white clover grow in the perennial fields, the supply of fertilizers is in most cases confined to phosphoric acid and potash. Nitrogenous fertilizers are used in places where legumes for some reason or another are not so numerous as to secure an ample harvest.

Both because it is of importance that the legumes are to prosper and because the mixing of fertilizers with the soil of the grass fields is not possible, endeavours must be made to manure the soil sufficiently and keep it in culture in the years before it is laid down to grass and clover. The point is to give lime, phosphoric acid and potash to the soil, according to the requirements of the plants, and in this respect the farmers can easily obtain the best guidance through the recent soil examinations. Potash may also be used with a good result as top dressing for the grass fields. Nitrogen is given to grass areas with few or no leguminous plants, and often in the form of liquid manure, although the loss due to evaporation is rather considerable. The use of nitrate of soda or ammonia for the grass fields is not common, but is very effective in many cases.

The yield from the grass fields is mainly dependent upon humidity, that is to say both of the kind and level of soil, and of the amount and distribution of precipitation. Apart from the south-western part of Jutland and small low-lying areas scattered over the country, Denmark's soil and climate are rather unfavourable to grass-cultivation.

Thanks to the work of the Danish plant breeders the recent Danish strains of grass field plants are much more hardy than formerly, but nevertheless the severe winters and dry summers in the forties have proved that there is a great difference between the winter and drought resistance of the different grass field plants and thereby in their utility.

Red clover is the most important leguminous plant in Danish grass fields for temporary ley, and although it does not stand the winter weather so well as white clover and alsike, unless weakened by frost, it is resistant to drought. Semi-late red clover seems to be hardier than early red clover. Lucerne of Danish, Canadian or French, du Puits origin is hardy and resistant to drought. Bird's-foot trefoil combines hardiness with resistance to drought, whereas trefoil must be characterized as the least winter-resistant leguminous plant in Danish agriculture.

Perennial rye grass is cultivated extensively in Denmark, but is hardly winter-resistant enough in the Danish climate. The late types are, however, considerably more hardy than the early varieties. Italian rye grass is the least hardy grass in the Danish fields. Timothy, meadow fescue, smooth-stalked mea-

dow grass, red festuca durinscula and cocksfoot grass are all hardy grasses.

With a view to the growth and development of the plants sown for ley, it must be pointed out that ley of lucerne, trefoil, bird's-foot trefoil, kidney vetch, Italian rye grass, perennial rye grass and cocksfoot grass stand a dry summer better than ley of red clover, white clover, alsike, timothy and smooth-stalked meadow grass.

In the seed mixtures prepared in the course of years, to be used by practical farmers, the tendency has constantly been to discard the species whose cultivation is uncertain, in favour of those whose cultivation is more certain. Some examples of seed are mentioned, below, in whose composition due regard is had to the resistance of the grass field plants to cold and drought, without the requirements as to yield having been essentially reduced in regard to years with mild winters and summers with ample precipitation.

Mixture for one-year grass field on good sandy or clayey loam, mainly for hay: 12 semi-late red clover, 2 timothy, 3 meadow fescue, 5 late perennial rye grass—all kg. per ha.

Mixture for two-year grass fields on good sandy or clayey loam, mainly for grazing: 8 semi-late red clover, 4 white clover, short lasting variety, 3 timothy, 3 meadow fescue, 2 cocks-foot grass, 5 late perennial rye grass—all kg. per ha.

Mixture for perennial grass fields on good low-lying soil, solely for grazing: 2 alsike, 2 Mors white clover, 3 wild English white clover, 4 timothy, 10 meadow fescue, 5 smooth-stalked meadow grass, 6 late perennial rye grass—all kg. per ha.

Also the care and use of the grass fields play an important part for the wintering, duration and yield of the grass fields. The experimental activity of the Government experimental stations and the Grass Field Sections of the Agricultural Societies have been, and are, carrying on experiments and examinations with a view to elucidating the various problems dealing with the exploitation of the grass fields. The examinations hitherto undertaken have shown that the grass areas must be used with care and circumspection. It is destructive to the grass fields always to be too closely browsed. Above all, a too close browsing too late in the autumn must be avoided. The result will then often be that the grass fields winter badly, besides which the growth is retarded next spring. The number of cattle must always be carefully adjusted to the size of the grass area, which means that there must be from $\frac{1}{3}$ to $\frac{1}{2}$ ha. of grazing area for each grown-animal.

As attacks of the ellworm, according to the examinations undertaken by the Committee for combating the ellworm in 1946-48, is very serious in Denmark, it is endeavoured to arrange the future cultivation of grass fields in such a way that these attacks can be prevented.

Further, every endeavour is being made to develop the clover strains. The great importance of clover, and perhaps particularly of white clover, for the yield and economy of the grass fields has been realized.

Concurrent with the measures here mentioned it is endeavoured to arrange Danish plant breeding in such a way that sufficient reserve feed may be available for the feeding of the animals in periods when grass is scarce owing to weakening by frost and drought etc. The reserve feed may consist of green forage plants, green lucerne, green fodder and grass silage, root tops ensilage, forage beets, boiled ensiled potatoes etc., besides which it is endeavoured to arrange plant production in the way that considerable quantities of grass may be housed as hay or ensilage for winter feeding.

It is endeavoured by an extended cultivation of lucerne and by increasing the ensilage and hay feed to secure winter feed of grass and green fodder plants in unfavourable feeding periods. The setback in the cultivation of lucerne experienced in this country in the forties is mainly due to the fact that the cultivation of the lucerne varieties available were too uncertain. But the appearance of the French Lucerne du Puits, and the closely related varieties has increased the interest in the cultivation of lucerne, and is at present greater than ever before. Danish farmers are prepared to adjust themselves to the partic-

ular cultivation requirements of lucerne. In districts with sandy soil, the cultivation of sweet lupine is of considerable interest.

Extended ensilaging, and the question of ensilaging or drying of crops rich in protein, such as clover grass and lucerne, has aroused great interest. Artificial drying of crops is, according to examinations undertaken by the Academy for Technical Science in 1938-39, considerably more expensive than the other two methods. The use of the drying method in Denmark is, furthermore, heavily restricted by the scarcity of fuel.

The question whether clover grass and lucerne are to be used for hay or ensilage will probably never in Denmark be 'either-or', but will rather be 'both-and'. However, it is believed by many that it will be advantageous to extend the ensilaging of these crops at the cost of hay. Large-scale extension of ensilaging must in Denmark be looked upon as a long-term arrangement of production. As it requires the building of a far larger number of efficient and well-placed silo plants than those found at present, and for the small and medium-sized farms it also necessitates assistance from the machinery stations.

The watering of crops by means of rain guns is occupying the minds. The Danish experimental stations have undertaken rather comprehensive experiments in order to throw light on the excess profit and economy of this implement. This measure can, however, owing to the rather limited number of natural water courses and lakes, only be of importance to comparatively few farmers. Owing to the scarcity of material, coupled with the large capitals required, only few farmers have up till now acquired such apparatus.

There are many tasks facing Danish grass field cultivation in the future. It is endeavoured to intensify the experimental and examination work. It is desired to extend the collaboration with the experimental stations for livestock production as it is recognized from all quarters that plant production and, not least, grass production, is the basis of Danish animal husbandry and thereby of the economy of Danish agriculture.

IMPROVED GRASSLAND MANAGEMENT

by **J. A. SCOTT WATSON**

Chief Scientific Adviser to the Minister of Agriculture and Fisherie

An increase in the output of livestock products is of major importance in relation to the European Recovery Programme. This increase may, of course, be achieved in part and in the long run, by better breeding and greater control over animal disease; but in the short term it depends largely on increased production of feeding stuffs. It is true that expansion of numbers can be achieved most quickly in the case of pigs and poultry, but these depend largely on grain and other concentrates. But as improved grassland can be made to provide increasingly for the needs of cattle and sheep, more grain and other concentrates can be released for other classes of livestock; and it has now become clear, in Britain at least, that there is immense scope for grassland improvement, much more than for increasing the yields of our arable crops.

The importance of grassland in the farm economy of Western Europe is shown by the following data:

Total Agricultural Areas of Certain Countries (a)
(thousand hectares)

	Pre-war average		1947
Tillage	51,719.9		52,406.6
Temporary Grassland	11,620.8		12,907.6
Total Arable Land	63,340.7		65,314.2
Permanent Grassland	33,239.8		62,644.1
Rough Grazings	50,663.0	(b)	13,840.0
Total Agricul. Area	147,243.5		141,798.3

(a) Countries for which information is available: Benelux, France, Ireland, Norway, Turkey, Denmark, Greece Italy, Switzerland, United, Kingdom.
(b) Rough grazings for Turkey included in Permanent Grassland.

The total area of grassland (including temporary pastures, improved pastures and rough grazings) thus greatly exceeds the area of 'tillage' or plough-land crops.

There is, of course, no clear-drawn line between 'permanent grassland' and 'rough grazing', and the distinction is variously made in different countries and even in different districts and individual farms. But this is unimportant for there are great possibilities of improving both categories.

One important fact is that, whereas it is easy to distinguish a crop plant such as wheat from the weeds that infest the wheat field, it is much less easy to distinguish the more desirable species of grasses in a pasture sward from the less desirable or worthless ones. Now we must not suppose that the right botanical make-up of a sward is the be-all and end-all of grassland management; but it should be one of our major objectives to encourage the better at the expense of the less productive and less nutritious species. It is surely true that, since grass is a 'crop', we should endeavour to control the weeds which infest it. Our treatment — cultivation, manuring and grazing management — should be designed to achieve this end. We must no longer be content to regard our pastures as providing inexpensive, if scanty and indifferent, food. Grassland can, under good and intensified management, provide more and better nourishment, for ruminant animals, than any other crop.

Technical and scientific knowledge of the principles of grassland management has greatly increased during the past two decades and, what is of greater importance, the exist-

ing knowledge is being increasingly applied with success and with profit. Twenty years ago the standard practice, even of the better farmers, was confined to occasional applications of lime and phosphate, with the occasional use of harrows. Ley farming — i.e. the alternation of sown grasslands with tillage crops — was confined to certain defined areas and the system was showing no tendency to spread. In the meantime, however, Britain was fortunate in that a group of enthusiastic workers, under the leadership of Sir George Stapledon, were attacking the problem of grassland development from a variety of angles. Progressive pioneer farmers have seen the advantage of the new methods, have applied them on their own farms and have thus set an example to their fellow farmers which is now being widely copied.

Pasture improvement involves a combination of procedures. Perhaps the first is the improvement, by breeding, of the plants commonly sown. The strains of grasses (rye grass, cocksfoot, timothy and others) and clovers (red and white) produced by the Welsh Plant Breeding Station have several important merits when compared with those formerly available in commerce. Firstly they are more leafy, and less prone to run to seed, so that they are more nutritious. Secondly they spread or tiller more freely, thus producing a closer sward. Thirdly they are longer lived, and compete more strongly against the poorer species such as *Agrostia* which tend to invade sown swards. Lastly, because they have been bred very largely from indigenous British plants, they are better adapted to the British environment than the old strains of commerce, which were produced under very different climatic conditions.

The second point is that, when drastic improvement is intended, it is best to plough up the old sward (making sure to bury the whole of the vegetation) and to sow afresh with the better strains. This process is spoken of as 'direct reseeding' and it is especially applicable where high rainfall and other difficulties preclude the profitable growing of cereals and other crops. A modification of this procedure is first to grow a 'pioneer' crop, such as rape, and to sow the grass seeds in the following year.

Next is the question of fertilizers. A proper lime status and a sufficiency of available phosphate are still, of course, fundamental to success. But an application of potash may also be required, and should be made if soil analysis shows a deficiency of this nutrient. Further, the old prejudice against the use of nitrogen, which was supposed to depress the growth of clover, is now disappearing, it having been shown that a good balance (as between grass and clover) can be maintained by proper management, even when considerable quantities of nitrogen are used. Another change that must be recorded is a departure from the old plan of giving large dressings of phosphate at infrequent iniervals — say of five years. The modern tendency is to fertilize more frequently and to apply relatively small amounts. This is particularly important on the dairy farms where the heavy withdrawal of phosphate (and also potash) leads to the rapid exhaustion of these mineral nutrients.

Perhaps most important of all is the realization of the advantage of temporary grasslands (leys) over old pastures. It used to be believed that it was a matter of years to establish a good pasture from seed, and there was a consequent tendency on the part of the farmer to keep certain fields under grass and to concentrate his grain, roots, potatoes and other arable crops on other fields. With modern procedure it is possible to establish a close rich sward, from seed, in a matter of four or five months. Such a sward is, in general, considerably more productive than an old one, and maintains its high productivity' if it is well managed, for a period of three to five years. By the end of that period the soil is greatly enriched, and is capable of growing several successive heavy crops of grain, potatoes, etc. Thus alternate husbandry results both in better grass and in better yields of food crops.

The quick establishment of grass, especially in areas of low rainfall, involves the use of

improved techniques. One point is to sow early in spring, before severe drought is likely to affect germination and early growth ; another is to bury the seed about 2 cm. deep in fine soil, and to compress well with a heavy roller ; a third is to turn on grazing animals as soon as there is any herbage long enough to be grazed, the advantages being that the further consolidation of the soil, combined with the grazing of the young shoots, causes the plants to branch ('tiller') and spread. Recent researches have also shown that there is marked 'inter-species competition' between the grasses ; in particular, ryegrass seedlings exercise a very depressing effect on those of timothy and meadow fescue. Italian ryegrass is more aggressive than the perennial strains. Finally the presence of a cereal — the so-called 'nurse crop' — is harmful to grasses, so that it is best, especially in the drier areas, to sow the grass and clover seeds alone. A small sowing of oats may indeed be included, but this should be grazed off an on early stage, and not allowed to ripen.

Another trend that is worthy of note is to use simple rather than the old complex mixtures. In the extreme case a particular variety of perennial ryegrass (or cocksfoot or timothy or meadow fescue) is sown in conjunction with a single variety of white clover (generally S. 100 or New Zealand 'mother'). Such a sward is easy to manage, whereas in complex mixtures one or other constituent was very apt to suppress its fellow. If the farmer has some fields of ryegrass white clover and others of cocksfoot-lucerne, he can, by appropriate grazing and resting, have lush pasturage available from early spring until late autumn. In years of good growth the surplus can be mown and ensiled.

The last of important recent developments is the application of the principle of rotational grazing which has recently been so successfully made in New Zealand. The procedure is to graze down each area in a matter of a day or two and, after harrowing and perhaps dressing with nitrogen, to allow the herbage to grow without interruption for perhaps three weeks, when it is again rapidly grazed off. Where fields are large, division is achieved by means of an easily movable electric fence.

Apart from the question of the more efficient production of grass, there is that of more efficient conservation. The choice depends on circumstances, but there is a marked tendency to reduce the acreage mown and made into hay, and to conserve an increasing proportion of the crop, cut at an early stage of growth, either by artificial drying or, more commonly, by ensilage. It is not only that young grass, conserved by either of these methods, is more nutritious than hay. There is also the fact that the losses of nutrients are very much smaller than those involved in haymaking. Moreover, if the acreage of hay is reduced ,the farmer has a better chance of dealing with the crop at the best stage of growth, and of choosing the best available weather for haymaking.

Artificial drying is, of course, by much the most efficient method of conservation, but the necessary equipment is costly, and it is a difficult problem of organization to maintain a regular supply of suitable raw material — i.e. grass, clover and lucerne, in the young and leafy stage of growth. The making of silage, though it necessarily involves some loss of nutrients, necessitates only very simple equipment. The American type of 'Tower Silo' is unsuitable for the small farm, both because small towers are difficult to pack tightly and also because their filling involves either the use of costly equipment or else a great deal of heavy manual labour. The pit type of silo, excavated in well-drained soil, makes for light work both in filling and in consolidation, for the horse or tractor can draw its vehicle over the mass during the process of filling. Where a well-drained silo is not available, a surface 'clamp', built between two retaining walls' is preferred to any other type of silo.

The production of more and better grass, and the use of better methods of conservation, are thus attainable in practice. By these means the farmer can keep more livestock, produce the extra supplies of milk and meat that are so importan t for the well-being of consumers and at the same time raise the profitability of his farm.

A HAPPIER LIFE IN THE VILLAGE- THE RURAL COMMUNITY CENTRE

by **J. Y. FOURNOUT**
Secretary General of the National Federation of Rural Community Centres

Over 500 rural community centres have been set up in three years. Over another 500 are in process of formation.

What is the reason for the success of a disinterested effort made after the war and enemy occupation in a country suffering from economic and financial difficulties ?

The reason is that the rural community centre meets a twofold necessity : the instinct of conservation from the social and moral aspect and the need for progress.

In effect, the life of every community, like the mind, cannot remain static. Life means movement, evolution.

To ' conserve ' the attainments of the past or the present, it is necessary to ' advance '. To stop advancing means regressing. The two wars which so severely hit our country within less than a quarter of a century paralyzed progress, especially in the rural areas. It was to be expected that the desire to live, following this upsetting of equilibrium, would be expressed in an effort of organization to make up for lost time, to find the means for a better life.

The rural community centre is one of these means. This explains the success of a plan too far in the early stages to be properly adjusted, but which has brought together a strong group of willing volunteers for joint action.

In order to understand the value of this action, life in 90 per cent. of our rural communes should be called to mind. Despite the difference in rural districts, climatic and soil conditions, customs, they all suffer from want of well-being, want of mental culture, and from boredom.

Without going into the reason why, we note the disappearance of a custom which answers the need for a social and intellectual life. A wide family circle used to keep up a standard both artistic (folklore songs and dances) and intellectual (reading, listening to tellers of legends and stories).

The custom of spending the evening socially with neighbours has disappeared together with the distaff and the spinning-wheel, with the flax-breaker and the hemp-scutcher.

On Sunday distraction is now sought at the public-house or café, in playing cards or drinking, sometimes in a game of bowls or shovelboard, more infrequently at the band-hall or the sports-grounds, and very seldom in the reading-room of a library.

And yet the desire for a more satisfactory life is not dead. The question is how to attain this desire.

The rural community centre attempts to rouse the people from this lethargy by erecting an abode where creative activities aiming at material improvement, better health, inner life and happiness will be organized by assembling a team of workers whose devotion, ability and willingness will make these activities possible.

Unquestionably it is a difficult, very difficult task. A small group of men and women decided to set up a Centre. They formed an association or cooperative, according to the statutes drawn up by the Inter-ministerial Board of Rural Community Centres at the Ministry of Agriculture in Paris, and prepared the necessary documents which on recommendation of the Departmental Commission set up

by the Prefecture, were approved by the National Commission.

The Centre has a legal status which will permit it to function on an effective basis. The administrators reflect . . . we need premises, we need a sports ground, a library, a cinema outfit, we need so many things ! and everything costs money ! Money, always money !

Who is going to give or lend this money ? The State, the national loan banks, the departmental or community administration ? What are the facts ? Enquiries brought the following results :

The loan banks do not grant any loans at present for erecting rural community centres. The State gives a building subsidy of 15 to 25 per cent. in annuities, if the project is approved by the Agricultural Engineering and Hydraulic Services. The department and the municipality, depending on whether they are wealthy or poor, interested or otherwise in setting up a Centre, provide insignificant, modest or considerable aid.

All this, however, never covers the main expense to be considered.

There remains the energetic solution, possibly the only one which indicates the will to progress, namely, everyone gives or lends money and volunteers his labour to erect this community home. This is what is being done in nearly every case. To be sure, the material results of this effort are not identical. Nevertheless, whether the Centre is an adjusted barn, a shanty or a fine house in stone, it represents a victory over sloth and selfishness.

The home built with the assistance of extempore and voluntary masons or carpenters is an act of faith. This home will live . . .because not only are money and material needed, but also a hard-working group of men and women who desire their work to be successful, and this factor cannot be provided by the administration nor by the loan banks.

We do not maintain that public loans can be foregone but we are sure that an initial effort locally is essential, for is not our preference given to that which has cost us considerable effort ?.

Moreover, State aid will be granted to us more easily when we have proved the validity and soundness of our venture.

If the material creation of the community centre demands courage and tenacity, how much patience, talent, conviction and ingenuity will be needed in organizing its activities.

The aims of the community centre are explained in the statutes of the Association :

This association is recreative and educational in character.

Its purpose is to purchase premises, grounds and equipment for the education, technical information and intellectual and social emancipation of its members.

The Association is required, in particular, to give its members the possibility of :

(*a*) Organizing, in each village, a centre of pleasant aspect, offered and open to all;

(*b*) studying jointly questions on the occupations concerning rural life and all related technical problems, of arousing the interest of rural circles in regard to syndical, mutual and cooperative action in close liaison with the professional bodies of the CGA ;

(*c*) organizing at the community centre lectures and practical, educative, artistic and technical activities likely to improve the physical and moral health of the members ;

(*d*) facilitating the physical and sports training of the young people with a view to augmenting the efficiency of their work and improving their physical and moral health ;

(*e*) organizing the leisure hours of the entire community by the establishment and use of libraries, friendly meetings, artistic performances ; theatre, cinema, concerts.... ;

(*f*) strengthening by every available means the moral solidarity of the inhabitants, the spirit of mutual understanding and aid.

The rules of procedure will fix the setting up and administration of special commissions (libraries, studies, sports, cinema, theatre...) within the Community Centre and will define their activities.

Whether it is a matter of a cinema, a theatrical troupe, choral group, technical talks or sports team, we must secure from the entire village not merely a passive interest but a keen and even enthusiastic participation.

Coming to the community centre frequently and with pleasure, to read a book, to take part in a group examining a technical problem, or to discuss a film, means understanding the true mission of the Centre.

The Community centre is not a banqueting hall nor a dance-hall where people meet once a week or a fortnight. It should be a real home radiating spiritual warmth every day; it can form part of everyday life like the family home.

Our community centres are still too recent to have attained their full development, but they will become 'indispensable' to everyone after having been 'useful'.

Let us contemplate the example of a community centre to which workers of all ages hasten twice a week on their return from the fields, not to the family meal but to this centre where they rehearse a part-song in order that they may worthily play their rôle in the large choral which assembles them on Sunday.

Noble symbol of the success of a community through the perseverance of individual efforts!

This effort of solidarity to attain a happier life is to be seen in the grouping of the rural community centres into a National Federation (Headquarters: 21 rue Victor Duruy, Paris 15e). Constituted on 17 May 1946 at the Château de Sceaux, the National Federation aims primarily at:

— serving as a permanent liaison centre to the rural community centres,

— defining and organizing propaganda for the community centres through every possible medium: the press, broadcasting, pamphlets....,

— procuring for the centres all information and resources they may require, particularly information and means likely to be useful for their functioning,

— encouraging the establishment of community centres and facilitating the constitution of their departmental Federation,

— arranging, supporting the establishment and functioning of specialized commissions within the rural community centres, particularly in regard to libraries, surveys and trips, cinema sport, the theatre and music,

— promoting technical improvements in agriculture and fostering the expansion of instruction and farm and domestic economy apprenticeship, by instituting courses and lectures, as well as the establishment of demonstration farms and centres, stationary or itinerant schools giving agricultural or domestic economy instruction,

— encouraging the young rural population to stay on the land through the study and defence of all economic and social measures, particularly through the development of cooperation, unions and mutual dependence, and all legislative reforms which their interests may require,

— assuring liaison with national bodies likely to assist the community centre movement, in particular:

— Ministry of National Education

— Ministry of Agriculture

— Agricultural professional organizations, especially the CGA

— Organizations for popular teaching such as the League of Education and the Rural Youth Movements.

The rural community centres are builders not only on the social and moral but also on the material plane.

Certainly the effort achieved cannot be judged from the appearance of the premises designed to foster the existence and spread of our associations. We cannot, however, remain indifferent to the symbol of union which is the material accomplishment, nor to all the sacrifices it expresses.

Whether it is a question of the community centre at St Paul de Fenouillet (eastern Pyrenees), a fine building with a main frontage of 50 metres, with its two spacious halls, one for plays and lectures, the other for physical training, its medical-social centre, library and domestic economy school, or of the small community centre in Pendedis (Lozère) huddled under the chestnut-trees 800 metres above sea-level, where the one hall has to be adjusted to serve for all purposes, the building expresses the desire to see the ideal which directed its construction endure.

The combination of bricks, planks, rubble or stone is not a cold futile monument. It is

an animated home organized to serve a noble idea of human improvement.

Large or small, rich or poor, our rural community centres express an effort at ' modernization '. They contribute greatly towards making each of their members desire a more pleasant village, a smarter home better arranged, a more harmonious life by developing personality.

Athletic teams, infant care, a library, theatre, sports ground, chorale, all these innovations of our rural community centres have the same goal in view : to make good citizens.

Drying of Fruits and Vegetables

Prepared by the Nutrition Division of the Food and Agriculture Organization, Washington, D. C., June 1949.

1. *Introduction*

The preservation of fruits and vegetables by drying them in the sun or wind or heating them over a fire is an ancient practice extending back into times before historic records were kept. It is said that in South America potatoes were dried before the Inca Empire was established ; the product, called ' chuno ', is still made in South America by methods which have remained unchanged [1]. In many other parts of the world, fruits, meats, and fish are preserved by primitive methods of ancient origin. During the great days of sail, ships undertaking long voyages were often provisioned with dried fruits and vegetables in the mistaken belief that such foods would help to prevent scurvy.

The first occasion on which products of this nature were produced on a large scale appears to have been during the Civil War in the United States, 1861-1865, when dried vegetables, apples, and peaches, as well as soup powders, were supplied to troops. Dried vegetables and fruits were also used for the same purpose in the Boer War at the beginning of the present century [2]. In the first World War there was very considerable production, and dehydration industries were created in some of the belligerent countries. Research work on the subject was carried out especially in the United States, the United Kingdom, and Germany. The quantities of dried vegetables produced amounted to thousands of tons. After the war, however, the dehydration of vegetables practically ceased, because the war-time products were generally poor in quality and unacceptable to civilian consumers.

A demand for dehydrated vegetables arose once more in the second World War. Concentrated foods of this nature are relatively easy to transport and save shipping space; further, they were found to be of value in relieving the monotony of military rations. As a result of intensive research in various countries, more efficient methods of production were evolved, and the quality of the dehydrated material greatly improved. It was claimed that the best products, when reconstituted and cooked, could scarcely be distinguished from fresh vegetables and that they contained valuable supplements of nutrients. In the United States alone, the production of dehydrated vegetables increased from 2045 metric tons in 1941 to 83,916 metric tons in 1945 [2]; there was, however, no similar increase in the production of dried fruits. After the war the production of dehydrated vegetables on an industrial scale immediately declined as it did after the war of 1914-1918.

In the present article some facts about the dehydration of fruits and vegetables, based largely on experience accumulated during the recent war, are briefly presented.

2. *Effects of Drying on the Nutritive Value of Fruits and Vegetables*

From a nutritional standpoint, dehydration, if properly carried out, may be considered a satisfactory method of preserving fruits and vegetables. The quality of the raw products and the speed and care in handling, blanching, and drying, determine the nutritive value of the finished products. A small proportion of the sugars, salts, and water-soluble vitamins may be lost in the preparatory stages before drying (washing, scalding, etc.) and some of the volatile oils and esters, and readily oxidizable substances such as ascorbic acid in the actual drying. But, in general, except for a lower ascorbic acid content, dehydrated fruits and vegetables when properly processed and packaged are as nutritious as canned or frozen products. As regards flavour, palatability, and often color and aroma, most consumers would agree that something is lost during the process of dehydration.

Unless the products are dehydrated to a low moisture content, significant vitamin losses may occur in a relatively short time, even at ordinary storage temperatures (18-27°C). If dehydrated vegetables are sealed in containers in which the air is replaced by carbon dioxide or nitrogen, losses are reduced. Sulphuring prior to drying tends to result in better ascorbic acid retention but greater thiamine destruction.

Thiamine, and perhaps folic acid and other vitamins, are more susceptible to destruction by heat when the moisture content of the food ranges from 5 to 10 per cent than at any other moisture content. At this range salts are present in high concentration, and sufficient moisture remains to enable destructive reactions to take place [3].

Table I shows the nutritive value of a few fruits and vegetables in the fresh from and after dehydration.

3. *Technique of Dehydration and Types of Driers*

The dehydration of food may be defined as the process by which water is removed without causing destruction of cellular tissues or decrease in energy value. The two main causes of spoilage in raw foods, the growth of bacteria and moulds, can be prevented by removing the greater part of the water originally present in the raw food. This can best be done by exposing the food to a temperature high enough to dry the food rapidly, but not high enough to cause 'cooking' or 'scorching'. The following factors determine the success of the drying process and the palatability of the finished product: (*a*) selection

TABLE I. - *Nutritive value of some fruits and vegetables* (per 100 g. of edible portion)

Food	Water g.	Calories	Carbohydrate g.	Vit. A IU	Thiamine mg.	Riboflavin mg.	Niacin mg.	Vit. C mg.
Vegetables								
Cabbage, fresh	92.4	29	5.3	80	0.07	0.06	0.3	52
dried	8.8	346	68.8	520	0.41	0.37	2.4	189
Potatoes, fresh	77.8	85	19.1	20	0.11	0.04	1.2	17
dried	7.2	363	82.0	0	0.25	0.10	4.8	26
Fruits								
Apples, fresh	84.1	64	14.9	90	0.04	0.02	0.2	5
dried	1.6	390	93.9	0	0.05	0.08	0.5	11
*(nuggets)								
Apricots, fresh	85.4	56	12.9	2790	0.03	0.04	0.7	4
dried	24.0	292	66.9	7430	0.01	0.16	3.3	12

[3] *Tables of Food Composition in terms of eleven nutrients*', U. S. Department of Agriculture, Misc. Pub. No. 572 (1945).
* Nuggets - an exceptionally dry product used in World War II.

of the raw material; (*b*) pre-processing (to destroy enzymes and prevent undesirable changes in colour and flavour); (*c*) dehydration; (*d*) compression (vegetables); (*e*) storage; (*f*) rehydration.

(a) *Selection of the Raw Material.* The variety of a fruit or vegetable has a strong influence on the quality of the dehydrated product. Some varieties are unsuitable for dehydration. To avoid disappointment and possible waste of materials and effort, only varieties which are known to be suitable for dehydration should be processed. Further, satisfactory products cannot be obtained unless the fruits and vegetables are selected at the proper stage of maturity [4].

(b) *Pre-processing.* After the fruits and vegetables have been washed and peeled and the inedible portion has been removed, they are blanched in steam or boiling water. Dipping in boiling water for two to three minutes is sufficient to destroy the enzymes, hasten the rate of drying, and arrest changes which make the finished products tough and difficult to cook.

Sulphuring is often used to improve the colour and flavour of dehydrated fruits and vegetables. It may increase the 'storage life' of the finished product by as much as 50 to 75 per cent. Vegetables are treated by being sprayed with, or dipped in, a solution of sodium sulphite. Fruits are exposed to the fumes by burning sulphur in a closed chamber.

(c) *Dehydration.* There are several methods of dehydrating fruits and vegetables. The three principal ones are the following: [5]

(1) By passing a current of heated air over them (tunnel, cabinet, and spray, driers);

(2) By spreading a solution or suspension of solids in water in a thin layer on a heated surface (roller driers);

(3) By heating the material in a closed vessel to which is attached a vacuum pump which removes the water vapor to a chamber where it is condensed.

Tunnel Driers — The fruit and vegetables prepared for drying are conveyed slowly on a moving belt, or in trays on trucks, through a long tunnel through which hot air is blown by fans. One drawback to this method is that the reduction of moisture content to the level desirable for storage, without at the same time damaging the product by excessive heat, calls for drying for fairly long periods at relatively low temperatures. A process known as 'bin drying' has been devised to reduce moisture content from a range of 10 to 15 per cent. to a lower and more desirable level of 2 to 8 per cent. A bin is a trough-shaped container which has a wide top and a comparatively narrow bottom. It is filled with partially dried products and heated air is forced through openings in the bottom. The operation can be continuous, since fresh material can be fed in at the top as the dried material is removed below. On the other hand, the entire contents of a bin can be dried to the desired moisture level (batch process), the bin emptied, and the procedure repeated.

Cabinet Driers. In this method, the food is loaded in trays and placed on a truck which is then wheeled into the cabinet drier. There are wind vents on opposite walls of the cabinet. Heated air is blown through slots in one wind vent, across the trays, and out through slots in the opposite side.

Spray Driers. A spray drier is a large container with an inverted cone-shaped bottom. The food, which must be in puree or liquid form, is sprayed into it through an opening near the top in the form of a fine mist. Hot dry air is blown in near the bottom. The dried material collects on the bottom and is removed at suitable intervals.

Roller Driers. Dissolved or suspended foods, soup mixtures, and mashed potato can be dried rapidly when spread as a thin film on the surface of a smooth revolving cylinder which is heated from the inside by steam. The dried material is removed by sharp scrapers. Roller driers may have only one heated cylinder, or they may consist of two steam-heated cylinders side by side and separated by a narrow gap.

Home Driers. For home use the cabinet drier or modifications of it is the most satis-

factory type. The cabinet drier has the advantage of being simple and easy to construct and operate. It may be placed on top of a stove, or a small drier consisting of a series of trays in a holder may be placed in the oven itself.

A method requiring a minimum amount of equipment was devised at the University of Heidelberg after the last war. It adapted U. S. D. A. procedures and has been used successfully in Germany. A series of trays without special holder or cabinet are stacked over an electric hot plate by resting the ends of the trays on chairs or stools. The heat is adjusted by controlling the distance between the bottom tray and the heat source.

Sun Drying. Where there is sufficient sunshine, fruits such as peaches, apricots, figs, pears, raisin grapes, and currants may be sun dried satisfactorily. After suitable preliminary treatment (washing, peeling, cutting into pieces if desirable, and sulphuring) the fruit is spread on trays and exposed to the sun. Later it is 'cured' or 'sweated' in boxes or bins. The curing or sweating process results in further drying and the uniform distribution of the moisture throughout the material, thereby lessening the danger of spoilage [6]. Vegetables, with the exception of chili peppers [7], cannot be sun dried satisfactorily.

(d) *Compression.* The drying of vegetables greatly reduces their weight, but the dried products are relatively porous. The air which fills the spaces between the dried particles can be largely removed by compression. This process not only reduces the volume of the product, and consequently the storage space required, but it also increases storage life and helps in the retention of flavour. Dried fruits do not lend themselves to this treatment.

Table II gives figures illustrating the compression of dried vegetables.

(e) *Storage.* The quality of dried fruits and vegetables can best be maintained if they are dehydrated to a low moisture content. Dried vegetables, processed under factory conditions, may be sealed in tins with an inert gas. Home dried vegetables can be stored in tins having tight fitting lids, or in glass jars; the latter must be stored in the dark. Waxed paper cartons with tight fitting lids may also be used. A storage temperature of 10° to 15° C is recommended.

(f) *Rehydration.* Rehydration is the absorption of water by the dried product, which makes it suitable for cooking. It is not possible to restore fully the original moisture content of dehydrated fruits or vegetables. The soaking of vegetables for about twenty minutes will usually ensure rehydration; after soaking, they should be brought slowly to a boil in a covered vessel and cooked until tender [8]. Fruits should be soaked for 2 to 4 hours.

Discussion

Dried fruits and vegetables contain so little moisture that the growth of spoilage organisms

TABLE II. - *Potatoes and cabbage in different forms - Calorie value and storage space occupied.*

Kind of Food	Calories per kg. of edible food	Calories per kg. of edible food plus package	kg. of edible food per cubic meter storage space	Thousands of calories per cubic meter storage space
Potatoes, fresh	726	616	513.6	370.8
canned	726	418	369.2	211.9
mash powder	3498	2904	369.2	1271.3
*mash powder, compressed	3498	2992	593.9	2083.5
dried slices	3498	2332	160.5	561.5
*dried slices, compressed	3498	2992	791.3	2761.6
Cabbage, fresh	176	116	144.5	24.7
canned	176	92.4	288.9	49.4
dried	1760	781.0	64.2	113.0
dried, compressed	1760	1465.2	433.4	762.8

* Tentative figures for columns 3, 4, and 5 - Figures from this table were obtained from the British Ministry of Food, Morris, T. N. *The Dehydration of Food*, pp. 10 and 11 (1947).

is checked. Shrinkage attained saves storage space and facilitates transport. Further saving of space may be achieved by compression as mentioned in Section 3 d. Dehydration may help to prevent waste due to seasonal gluts in production, the shortness of ripening and harvesting seasons, unfavorable marketing conditions, lack of means of transporting the fresh product and of refrigeration.

Dried fruits of certain kinds are well established and in general well liked. Their storage life is, however, relatively short. In temperate and cool regions they may keep well for a year but they deteriorate more rapidly in the tropics. Containers should bear the date of manufacture to facilitate their reaching consumers before deterioration sets in.

Dried fruits have usually a moisture content of 25 per cent, a level which can be obtained by sun drying; they retain to a large extent the flavoring agent and volatile oils present in the fresh material. With few exceptions, vegetables cannot be satisfactorily dried by this means; a lower moisture content is needed. The removal of moistures is relatively easy and rapid in the early stages, but is retarded as moisture content falls to 25 per cent. or below. Simultaneously, the danger of damage by heat increases, as does also the concentration of reacting substances which lead to biochemical deterioration. A larger percentage of flavoring agents, essential oils, and esters, are driven out when material is dried to a moisture content of 2 per cent than when drying proceeds only to the level of 25 per cent. Considerable skill and special technique and equipment are needed to produce dried vegetables of good quality which have suffered damage to a minimum extent. Less skill is needed for the satisfactory drying of fruits.

Small scale methods of dehydrating vegetables suitable for application in the home have been evolved. Dehydrated vegetables produced in the home tend, however, to be inferior in quality to those produced under factory conditions. The latter, when dried with proper equipment by experts and packaged in air-tight containers with nitrogen or carbon dioxide, can be stored for 18 to 24 months without loss of flavor; home produced vegetables have much poorer keeping qualities. Such technical methods are beyond the scope of individual small scale producers, but it would be possible to establish well-equipped dehydration plants on a community or village basis. Attention should also be given to the possibility of encouraging other methods of home preservation such as canning and freezing. Home dehydration is of chief importance where home canning and freezing are not feasible. These points must be borne in mind in considering the development of vegetable dehydration in ordinary peacetime conditions.

Many agricultural and home economics colleges in the United States, as well as its government bureaus, have published bulletins on the home drying of fruits and vegetables, and on the construction of home driers. In Germany where home canning and freezing are still practically impossible, home dehydration is reported to be used successfully. A popular publication was prepared in 1947 with the help of experts from the United States Department of Agriculture and sold under German auspices in the British and American Zones. It is reported that copies will be available for sale in 1949 and that a condensed version for free distribution on a large scale is being prepared.

[1] Salaman, R. N. *The Potato in its early Home and its Introduction into Europe*. J. Roy. Hort. Soc., 62 Part II. 1937. p. 76.

[2] U. S. Quartermaster Food and Container Institute for the Armed Forces. *Fruits and Vegetable Products*, V. 9. September 1947. pp. 34, 35.

[3] Elvehjem, C. A. *The Role of Food Technology in Modern Nutrition*. Food Technology, Vol. 2, No. 4. October 1948. p. 343.

[4] U. S. Quartermaster Food and Container Institute for the Armed Forces. *Fruit and Vegetable Products*, V. 9. September 1947. p. 36.

[5] Morris, T. N. *The Dehydration of Food*. Chapman Hall, Ltd. 1947. p. 23.

[6] Loper, R. M. *Homemade Food Driers*. University of Nebraska Extension Circular 709. April 1942. p. 19.

[7] Von Loesecke, H. *Outlines of Food Technology*. Reinhold Publishing Co., New York City. 1942. p. 148.

[8] U. S. Food and Container Institute. "*Fruit and Vegetable Products*. V. 9, No. 1, September 1947 pp. 51, 52.

ITEMS OF INFORMATION

NUTRITION

Critical shortages of food

Sir Herbert Broadley — the Deputy Director-General of FAO gave an address on ' Critical Shortages of Food ' at the United Nations Scientific Conference on the Conservation and Utilization of Resources on 18 August at Lake Success. We give below an abstract of his speech as we feel it is of primary importance to the world in general.

It would be true to say that, at the present time, there is no country in the world where everybody is adequately fed ; — and in many countries hungry people number thousands and millions.... It is the very fact of famine and starvation, the existence of hungry people (due to the world's inadequate production of food), which is partly the cause of...unhappiness and illhealth, envy, political disturbances, and even war, all of which mean the production of much less food than a peaceful, energetic world could provide.

Add to this situation the rapid increase in population which has marked the post-war years — 20,000,000 new mouths to be fed every year — and the relatively slow rate of agricultural recovery in a war-ravaged world, and one may well be tempted to despair of achieving a happy, wellfed, peaceful planet. It is because there are grounds for hope as well as for despair that the United Nations has called this Conference...

The establishment of FAO in 1945 provided the first attempt to determine how far the world's food supplies fell short of minimum needs... Its findings revealed that the total amount of food which the world was consuming before the war vastly exceeded that which was being currently consumed in those immediate post-war years...

Rounding off the figures and taking the world as a whole... an adequate diet for all, by 1960... means a need of over 60 million more tons of cereals as compared with pre-war supplies, another 30 million tons of meat, 250 million additional tons of fruit and vegetables, and no less than 35 billion gallons more milk. That and more is what the world would need to provide its teeming millions in 1960 with a reasonably satisfactory diet for everybody. A vast undertaking indeed !...

What progress are we making toward its achievement ?

Since the war, progress has been all too slow. Some progress indeed there has been... but... it falls far, far short of what we so desperately require.

For 1948/49, the world supply of foodstuffs is estimated to be about 5% above the average output of pre-war and at least 10% above that of 1947/48. But with the increase in population which has occurred in the last ten years (no less than 200,000,000 people), the average consumption per head is still below the pre-war figures...

New strains, more fertilizers, new production techniques, and modern appliances are all playing their part. On land at present under cultivation it is entirely practicable to increase production on most items by an average of at least 20%.

We can bring back into production... fields which are no longer fields but barren tracts or waste desert. We are now only too well aware of the dangers of soil erosion. During recent years, measures have been devised and applied to prevent its extension and to restore lost acres... Forestry practices and schemes of planned reafforestation will not only provide the world with the timber and other forest products it needs ; they will also protect agricultural land from erosion, gradually restore lost fertility, and be the means of bringing water supplies to dry and thirsty lands...

...Of the half (of the land surface of the earth)

which is potentially cultivatable, only about one-fifth is now being farmed...

The seas — the origin of life — may contribute much to the preservation of the earth in large quantities of food, in mineral salts invaluable as fertilizers, in power.

Dr Kellogg of the U.S. Department of Agriculture has estimated that if the farming of existing crop land were raised to those reasonable standards of efficiency which have been demonstrated in many places,... then those extra 60,000,000 tons of cereals, 30,000,000 tons of meat, 350,000,000 tons of fruit and vegetables, and those 35,000,000,000 gallons of milk would be much more than forthcoming.

There is therefore no cause for despair; but there is cause for serious reflection and real determination.

If funds for an expanded program of technical assistance for economic development are provided by the member countries of UN, this will supply a means of undertaking this vast task — charting the world's potential food resources and planning for their better utilization. In any case, this is so vital a matter to humanity that the nations of the world might establish a 'World Food Fund' for the very purposes I have described, possibly as the spearhead of the comprehensive program of technical assistance for economic development. It would provide the resources for accurately measuring the possibilities, organizing the necessary research, planning the strategy of the international food campaign, and training those upon whom will fall the responsibility of directing the tactical operations of that campaign. So far, we have only just begun to realize the dangers of a world population hungry, underfed, ill and discontented; we have only glimpsed the possibilities of increased food production on a vast scale. But we have not yet taken either very seriously....A World Food Fund would enable us to marshall the forces needed to win this terrific battle on which so much depends. If we succeed, it may well be that the 20th Century will be the century of the agricultural revolution.

One of our greatest problems of today is to achieve a satisfactory system of exchange between the urban and the rural population. Millions are hungry in other countries for lack of the very food that may soon be piling up in unsold dumps elsewhere.

FAO in preparing a report on all the implications of the present position; with practical proposals for ensuring that the available supplies of food flow from those who create it to those who need it — that farmers do not arbitrarily have to restrict production while millions of people are still hungry and underfed...

That is the field in which FAO is endeavouring to help its member nations.

Fertilizer investigations with radioactive phosphorus in Canada

by H. G. Dion, *Associate Professor, Soils Department, University of Saskatchewan, Saskatoon, Canada.*

The program of investigation involving the use of radioactive phosphorus P^{32} in fertilizer studies at the University of Saskatchewan, Canada, was begun by Dr J. W. T. Spinks of the Chemistry Department, and has been carried on cooperatively with the Department of Soils since 1945.

Radioactive phosphorus, P^{32}, is incorporated into fertilizer salts in such a way that the P^{32} has exactly the same form as the other phosphate present — for example, in ammonium phosphate 11-48-0, the P^{32} will be present as ammonium phosphate. In addition the salts are prepared by solution and recrystallization so that the P^{32} is distributed perfectly throughout the crystals. As a result, any fertilizer phosphate taken up by the plant can be detected and estimated exactly in the ash of the plant by virtue of the presence of P^{32}, which can easily and accurately be determined with the Geiger counter, a device which measures the number of decaying atoms in a given time. Since the rate of decay of P^{32} is accurately known (half-life 14.3 days), it is simple to calculate the content of P^{32}, to correct for decay since the time of fertilizer application, and to arrive at the amount of fertilizer phosphate represented by the amount of P^{32} found.

Preliminary studies, both in the greenhouse and the field, involved the determination of the rates of uptake of phosphate from fertilizer and soil as the wheat plant develops. The indications are that the plant will take up a large part of its early phosphate from fertilizer where applied, but that in the later stages, the rate of uptake from the fertilizer falls off, while the uptake from the soil continues to increase to maturity.

Studies on uptake of phosphate from fertilizers by wheat as affected by different rates of appli-

cation indicate that the greatest percentage of applied phosphate taken up is from low rates of application, while with higher rates, the actual amount taken up increases but the percentage of applied phosphate taken up falls off.

Studies on the availability of various forms of applied phosphates in the neutral to alkaline calcareous soils of Western Canada have indicated that wheat takes up most phosphate from ammonium phosphate $NH_4H_2PO_4$, slightly less from NaH_2PO_4, and di-calcium phosphate $Ca_2H_2(PO_4)_2$ being less available, the di-calcium form being a particularly poor source of phosphate under these conditions. This is interpreted to indicate that where phosphate is rendered unavailable by conversion to $Ca_3(PO_4)_2$ due to high *p*H and calcareous conditions, the availability of fertilizers is controlled partly by the relative ease or difficulty with which they are changed to tri-calcium phosphate in the soil. Most of the superior qualities of ammonium phosphate 11-48-0 are attributable to the fact that this material carried no calcium, and hence is less readily changed to $Ca_3(PO_4)_2$ than mono-calcium phosphate, for instance. The chief virtue of the ammonium ion in this particular type of commercial fertilizer is not that it is important nutritionally under these soil conditions, but that it helps to slow down the conversion by calcium.

The work is continuing.

The European Centre of applied agricultural and demographic statistics

Despite the marked progress made in recent years, agricultural and demographic statistics still show, in many countries, considerable gaps which hamper the work of both governments and international bodies.

With a view to improving statistical methods by enabling the officers of statistical services in the different countries to learn new techniques, in 1948 centres of applied statistics were set up by FAO in Mexico and at Bagdad. As encouraging results were obtained at these centres it was decided to establish in Paris a European Centre of Applied Agricultural and Demographic Statistics, which will operate from 26 September to 22 December 1949.

This Centre is established and financed by the Food and Agriculture Organization of the United Nations in cooperation with the UN Statistics Office and UNESCO. The French Government willingly gave its consent for the site to be located in Paris and granted a subsidy for the working of the Centre in addition to the amounts allocated by the international organizations.

Instruction at the Centre will be theoretical and practical ; the persons under instruction will study all problems connected with the running of a modern statistics service. Particular attention will be given to the preparation of the world census of agriculture and demographic censuses which are scheduled for round about 1950.

Instruction will be given on the following subjects :

Principles of statistical theory ; statistical methods applied to economics ; agricultural censuses ; statistics and demographic censuses ; statistical sampling methods in agriculture ; current agricultural statistics ; methods of preparing food balance sheets, administrative organization of statistics ; use of calculating machines and multicopying equipment.

The Centre will be under the supervision of Professor Darmois, Director of the Statistics Institute of Paris and member of the Statistics Commission of the United Nations.

The professors will be selected from among the best specialists in European countries, in particular from the senior personnel of national statistics services.

The courses will be attended by personnel of national statistics services desirous of supplementing their knowledge, although students who intend to enter government service later will also be admitted.

The courses will be given in English and French.

Applications to attend the Centre are received by the Economics and Statistics Division of the European Office of FAO (Palais des Nations, Geneva).

Effects of the drought in France

The ' Bulletin d'Information ' of the French Ministry of Agriculture in August summed up the agricultural situation as follows :

' Cereals not seriously damaged by drought ; potato yields probably reduced by 30 per cent. compared with normal year ; sugarbeets will give average yields if conditions are favourable in August and September ; bean crop very poor ; vineyards free from cryptogamic diseases ; fairly abundant fall of apples and pears although the crop promises fairly well ; vegetable production checked ; hay harvest mediocre but excellent in quality ; grassland and pastures scorched, offering poor sustenance to livestock ; appreciable reduction in dairy production ; cattle numbers far too large for forage resources ; check in production of dairy stock ; great difficulty in meeting the water requirements of stock '.

The crop situation in Italy

Considerable damage was caused to the summer crops by the persistent drought. Rice, however, shows satisfactory growth ; the maize crop is fairly good in North Italy and in some provinces of

the Centre, but was very severely attacked in Ravenna Province by the European corn borer.

In several provinces the vine is attacked by downy mildew and Oidium, but in other vineyards growth conditions are good.

According to the information supplied by the Central Statistics Institute, on 31 July crop forecasts for wheat were 68,600,000 quintals, corresponding to an increase of 12 per cent. compared with last year.

The area grown to rice amounted to 129,500 hectares, being 9 per cent. less than last year; summer maize covered 136,200 ha., or 1.8 per cent below the 1948 area; early potatoes were cultivated on 29,700 ha. (1.5 per cent increase over last year), while the potato yield was 11.5 per cent. lower (2,602,800 qls). The area grown to colza and rape was smaller than in 1948 by 36.3 and 25 per cent. (7,016 and 7,597 ha.) and production diminished by 52.2 and 41.3 per cent. respectively (57,130 and 55,380 qls). Bean production for seed was 21 per cent. less than last year (2,622,950 qls).

As a result of the reduced forage supplies a large number of animals in the communes with a population of over 5,000, had to be sent to the abattoirs, 15.3 per cent. more during the first four months of 1949 than in the same period in 1948, and 53 per cent. more than in 1947. The abattoir output amounted to 49% pork, 40.7% beef, 7.2% mutton and goatflesh, and 3% horseflesh.

In September heavy storms improved conditions save in some regions where hail caused serious damage, particularly in the vineyards.

Crop harvests in Portugal

The effect of the drought was widespread despite some heavy storms in June. In certain areas the crops were damaged by hail. The area sown to potatoes was reduced as the farmers feared a shortage of water. The rice-fields cover a smaller area than last year. The drought compelled abandoning cultivation of part of the rice-fields and cultivation costs have increased through the difficulty in obtaining water and the need for more frequent hoeing. The maize and bean crops have suffered appreciable damage. A large part of the chick-pea crop was lost, though the surviving plants are of good quality.

The grain harvest was somewhat better in the north than in the south. The spring wheats are, in general, inferior to those of last year which were particularly good. On the whole, however, wheat as well as other grains show yields higher than last year, increase being 5% for rye, 8% for oats, and 10% for wheat and barley.

The olive crop, despite the abundant fruit-shedding caused through the drought, appears to be good in general except in the Tras-os-Montes region where it is expected that yields will be lower than in 1948.

Save for a certain amount of Oidium attack and to a lesser extent downy mildew, the vines show good growth. The pasture and consequently, the livestock situation is rather bad.

(Taken from the *Boletim Mensal do Instituto Nacional de Estadistica*, Lisbon, 1949, N° 6).

Swiss pastures

'In the Jura as in the fore-Alps, from east to west and south to north, no aftergrowth, no more green forage, poor potato and fruit harvests, these appear to be the features of 1949' states the *Industrie Laitière suisse* (Berne, 12 August 1949, publication of the Central Milk Producers' Union). The writer of the article, W.S., points out that in several regions the hay supplies have already been cut into in order to supplement pasture. Milk deliveries are diminishing rapidly. It should be noted that the drought also affects the quality of the produce, and it is to be expected that high grade cheeses in demand on the export market, are not likely to be plentiful.

Food production in Northern Ireland

The Minister of Agriculture for Northern Ireland announced that remarkable increases in food production had been achieved there in recent years. In 1948-49 sales of milk off farms totalled 80,000,000 gallons, as compared with 39,000,000 gallons in 1938-39 while egg production had risen to 74,000,000 dozen against 43,000,000 dozen ten years ago. It was possible that the target of 80,000,000 dozen for 1952-53 would already be reached in 1949-50. On January 1949 the numbers of poultry were 19 % greater than in the previous year and 70 % greater than in 1939. The production of pig-meat was 373,000 cwt in 1948-49 as against 287,000 cwt in 1947-48, while mutton and lamb production had risen from 75,000 cwt in 1947 48 to 195,000 cwt in 1948-49.

The appointment of local agronomists in Czechoslovakia

The increasingly important tasks set by the planned economy in agriculture in Czechoslovakia have necessitated the appointment of local agronomists in the various villages. The Farmers' Union has already schooled 10,000 farmers, and acquainted them with the Five Year Plan in agriculture, with the production tasks and all the problems that must be solved so that agriculture may fulfil its operational plans. It will be their task to see that the production tasks of the agricultural plan are fulfilled next season, by helping to assess the

fairly contracted delivery programme. They will advise farmers, farmers' wives and youth and will thus make use of their experience in agriculture.

(*Zemědělské noviny, IAI Bulletin, 1949, N. 3*)

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Under a decree of the Czechoslovak Ministry of Agriculture of 30 May 1949, all hop-fields planted more than 30 years ago are to be ploughed up and new ones planted by the end of 1953. Exceptions may be made by the local authorities in the case of hopfields which are unaffected by contagious diseases and which have yielded during the past three years larger average harvest than other hop-fields in the district. The area to be ploughed up must not exceed the area which the hop-growers can replant within the same year.

(*Zemědělské noviny' 8. VI. 1949, IAI Bulletin, 1949, N. 6*)

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The central School of the Czecoslovak State Farms was opened at Pohorelia (Moravia) on 7 June 1949. It is intended for the training of leading administrators of the State farms. The first course will last 5 months and will be attended by 50 selected agricultural and industrial workers.

(*Zemědělské noviny, 8. VI. 1949. IAI Bulletin, 1949, N. 6.*)

Agricultural Cooperatives in Albania

In 1946 Albania had only seven farm cooperatives with 2,330 acres of land. At present their number is 56 with 26,630 acres of land. The volume of their production in 1948 was 25 to 30% larger than that of privately owned farms.

The cooperatives have greatly improved the standard of living of their members.

At present there are 56 elementary schools, 28 nurseries connected with the cooperatives and the latter are making preparations for building new cultural homes

In the course of the last three years the cooperatives received more than 11 million leka in credit, the necessary amount of seeds and agricultural implements. This year the Government subsidies will be even larger. A large part of the fields of the cooperatives will be tilled with the help of tractors. Besides that the cooperatives will receive twice the amount of fertilizers given to them last year.

(*Socialisticheskoie Zemlědělié 20. II. 1949, IAI Bulletin, 1949 N. 3*).

Grass conservation to feed more stock

At a conference in the United Kingdom called by the National Farmers' Union to discuss methods of improving grass conservation and so expanding meat production, the British Minister of Agriculture, Mr Tom Williams stated that owing to proper treatment the output of food from grassland had been trebled.

However, although the amount of silage produced last year was 725,000 tons — more than double the quantity of that produced in 1947 — it was far from being a large scale contribution to the national supply of feedingstuffs. It was hoped that production of silage would be at least double this year. Mr Williams further stated that he would like to see more groups of farmers co-operating in the establishment of drying plant. The United Kingdom were considering the possibility of short-term loans for farmers and commercial enterprises who would welcome an advance of part of the fairly high capital outlay required for these installations.

Cattle in the tropics

The good points of the Zebu are being realized by farmers in tropical countries as well as by scientists who have been surveying the resources of tropical and sub-tropical countries. The zebu type withstands heat as well as diseases resulting from ticks much better than European cattle.

The body temperature of European cattle exposed to high temperature rises much earlier above normal than that of native cattle. Many disappointing results are due to disregard of this fact. The use of well-bred European cattle of high quality when exposed to tropical conditions or when used to cross with native cattle has proved unsuccessful. In order to obtain the high production of European improved breeds and to achieve resistance to heat and tick-borne diseases, breeders in Australia, Argentina, India and Africa have crossed the Zebu and European strains. While European cattle have been bred for centuries to retain body heat under wet and wintry conditions, the Zebu has been selected over centuries for a capacity to get rid of heat quickly under hot and sometimes humid conditions. Reports on the development of cattle breeding and milk production in parts of India and Middle East which have been made to the United Kingdom Government by Dr Norman Wright, Director of the Hannah Dairy Research Institute and Chief Scientific Adviser to the Ministry of Food, have proved to be most enlightening. His observations led him to consider possible ways in which cattle could adapt themselves to varying climatic conditions. Examination of reaction to different temperatures and research into the heat-regulating system of cattle have finally led to two definite

research lines. The microscopical structure of the skin and of the various glands in it are being carefully studied by histologists in order to obtain accurate and fundamental information as to how heat is lost from the skin of the cattle. A second line of research is adopted in examining the actual reactions of cattle when submitted to varying conditions of heat and moisture. In order to study these reactions a special room has been constructed which is called the 'psychrometric' room, and which involves the use of an instrument for measuring water vapour in the atmosphere and so by derivation for measuring heat and cold. The temperature of the room is kept constant by a flow of air whose temperature and moisture content are thermostatically controlled. Observations are then made on an animal in the room to obtain records of pulse rate, respiration rate, skin temperature, degree of salivation, amount of visible perspiration if any and general demeanour. Observations on the composition of blood and milk are also made. (Abhtracted from 'Farmer and Stockbreeder').

The Five Year Plan in apiculture

The following are the tasks of the Five Year Plan in apiculture :

(1) An increase of the number of bee families by 100 %. As Czechoslovakia has now 552,000 bee families the number in 1953 will be 1,158,000. The increase in the numbers of bee families is called for by increased fruit growing as well as oil seed and industrial seed production. For this increase to result in economic progress the number of bee families must be increased at such a rate as to provide 5 families for each hectare.

(2) An increase in the average honey yield. At present this average is something more than 4 kg. from one bee family which is rather small. The goal for 1953 is 6 kg.

(3) The increase of wax production in beehives. Czechoslovakia is not self-sufficient in wax production, on the contrary, wax production does not even reach 25 % of consumption. The principle of rational apiculture, i. e. that the bee-keeper must gain at least as much wax annually from the bee families as he put into the partition walls, will be put fully into practice only at the end of the Five Year Plan.

(4) The increase in the production of apicultural implements by 400 %, for there are prospects of considerable exports to various countries.

(5) Export of bee families and queens must be opened up. Now for the first time Czechoslovakia has placed her bees abroad, mainly in Poland. The export figures for the first year are 2,000 queens and 5,000 artificial swarms. Export will go up during the next years.

(6) In the territory of the Republic the introduction in the different regions of acclimatized bee breeds, and the removal of breeds that do not correspond to the principles of rational bee-keeping. (*Český včelář 83 (1949), N° 3,p. 29 IAI Bulletin N° 7-8*)

Work of the Belgian Institute for standardization on the analysis of of dairy products

(*Sent by the Belgian National FAO Committee*).

Shortly after the establishment of the Belgian Institute for Standardization on February 25, 1946, it undertook to draft a plan of work which was to include all the studies the Belgian Standardziation Association was engaged on when its work was taken over by the Belgian Institute of Standardization, and also any others that might be asked for, and which could be undertaken with due regard to the means at the disposal of the BIS.

The Ministry of Economic Affairs and of the Middle Classes had asked that the standardization of instruments and methods used in the analysis of milk and its products be an item on the program. It was only at the beginning of 1948 that it was possible to begin organizing this study and as it was urgent to encourage the unification of the current methods of analysis of cream so as to assure the accuracy of the measurements used as a basis for business transactions, the qualified study commission dealt first with the standardization of cream butyrometers. The first plan, NBN 200, is now the subject of a public enquiry and deals with the measurement of fatty matters in cream by the Gerber Roeder method (gravimetric). The second proposal for standardization deals with the measurement of fatty matter in cream by the Gerber Koehler method (volumetric), now being prepared. It seems likely that this last standardization proposal may be made the subject of a public enquiry about October 1949, when the enquiry into NBN 200 will be finished.

No final decision has yet been taken on the further works relating to the standardization of the instruments used in analysing dairy products.

XII[th] International Dairy Congress Stockholm, 15 August 1949

The 12th International Dairy Congress was organized by the Swedish authorities in collaboration with the International Dairy Federation. About 2000 participants attended the Congress. Fifty-seven countries, among them all the European countries, were officially represented. Before the Congress the regular annual meeting and general assembly of the International Dairy Federation, which prepared reports on its activity for the Congress, were held. At its closing plenary session the Congress passed resolutions presented (A) by six sections of the Congress (milk production, hygiene and control — physics, chemistry and microbiology — dairy industrial technique — economics and trade — organization of the dairy industry - tropical dairying) and (B) by the International Dairy Federation. These resolutions were the following :

A.

I. *The Congress recommends :*

1. That a statement be prepared which would be suitable for the use of Advisers in dairy husbandry, summarizing recent reliable information as to :

a) the possible ways in which seasonable and other defects in milk quality (*i. e.* in fat percentage, in non-fatty solids percentage, in vitamin content and in content of other nutritionally important factors, in odours and in flavours) can be prevented and ;

b) how far cheese quality (particularly defects such as off-flavours, gassiness and other texture defects) and butter quality (particularly undue softness or hardness) may be controlled, by attention to the diet and general management of the cow.

2. *a*) That a technique should be worked out for the cleansing of udder and teats before milking, with particular regard to the use of hypochlorite solutions, which technique, when correctly used, will both contribute to reducing the risk of spreading infection and also reduce the initial number of germs in the milk.

b) that a standard technique should be worked out for the cleansing and disinfection of milking machines, and that the dairy industry endeavour to ensure that this technique is followed closely both by the manufacturers in their instructions to buyers and by the producers when using the machines on dairy farms.

c) that a standard method should be worked out for ascertaining the cleanliness of milk utensils, in order to enable results from different places to be compared.

3. That, in the interest of the producer, the dairyman and the consumer alike, and for whatever purpose milk is to be used, either for direct consumption or for the manufacture of milk products, all milk bought as such should be paid for on a basis of quality, both compositional and hygienic.

The Congress considered that :

a) From the standpoint of the dairy industry, the most *important* epizootics are : streptococcal mastitis, bovine tuberculosis and bovine epizootic abortion due to Bang's bacillus. These diseases not only cause heavy losses as regards milk production and cattle breeding ; they also impair the quality of the milk and of dairy products made from it. Moreover they entail the serious risk - especially in the case of bovine tuberculosis and of bovine abortion - of the transmission of diseaseto the consu mer of the milk or dairy products concerned.

It is therefore necessary that the dairy industry support the official veterinary measures adopted in the struggle against epizootics.

b) Numerous countries have not yet adopted official measures for the control of streptococcal mastitis. Where such measures are in force, they aim at the eradication of the disease in infected herds by periodical bacterio-diagnostic examination of the milk of every cow, by improved hygienic precautions in the stable and by treatment of all diseased and latently-infected udders with the appropriate medicament.

Intra-mammary infusion through the teat of penicillin-solutions has proved to be the most effective method of treatment for streptococcal mastitis.

c) The control of *bovine tuberculosis* can be supported effectively — on a collective basis — by the dairy industry by taking steps to regulate the distribution as well as the selling price of the milk. Dairy herds can only be acknowledged ' free of tuberculosis ' when tuberculosis tests repeated at an interval of 4 months at the least have proved negative.

Different countries have succeeded in eliminating bovine tuberculosis through appropriate measures established in close collaboration with the dairy industry.

d) The dairy industry can also help in the struggle against *epizootic abortion due to Bang's bacillus*, by taking measures against the sale of infected milk and introducing, again on a collective basis, preventive vaccination of young cattle and measures for improved stable hygiene.

e) *Dairy control officers* have to cooperate permanently with the veterinary officers, in order to detect in due time the sources of infection and to take the necessary measures to eliminate them.

f) The appropriate heating of dairy *by-products* is especially recommended if they are to be used for feeding animals.

g) *Campaigns for the enlightenment of dairy farmers* regarding epizootics ought to be promoted or if already in existence, strongly supported, by the dairy industry.

II. *The Congress expressed the view*

that the existing systems of registration of dairy scientific literature can by no means be regarded as satisfactory, and proposed therefore that the Study Commission of the IDF be requested to give this problem its attention. It was considered advisable to evolve for the registration of reference literature a common system which, without any changes in principle, would be suitable for registration in laboratories.

III. *The Congress considers that*

1. the development of the continuous buttermaking process to be of great importance and is therefore of the opinion that scientists of all nations should collaborate on this question.

2. The Congress considers that :

a) It is necessary to establish international standard methods for the microbiological examination of dried milks, so that the operation of dried milk plants may be judged.

b) The concentration of milk by freezing is an important development to which increased attention could well be directed.

c) Evidence should be obtained of the exact effects of high and low temperature preheating in the concentration of milk.

3. The Congress requested :

a) that the International Dairy Federation consider the practicability of adopting an international metric standard for sanitary pipe fittings, and also consider adopting a standard for bottle necks, packets for butter, etc.

b) that the IDF should investigate the merits of functional standardization of machinery and take whatever steps are necessary to make this matter widely understood and adopted.

c) that the IDF should refer to the appropriate committee the specific proposals made by Van der Grijp for consideration.

4. The Congress considering that
the subject of adequate building of dairies is of vital interest to the whole world, resolves that extensive research should be undertaken into the following matters :

a) Time and motion studies in dairy plants ;

b) Elaboration and more suitable materials for dairy floorings ;

c) Methods for moisture proofing of masonry walls and for improving existing protective paints for wooden metal and concrete elements.

5. The Congress resolves that :
in the construction of dairies the principle should be recognized that the processing room should be kept as free as possible from piping and secondary equipment, and should be reserved solely for such equipment as is required for processing itself. Furthermore, the design of the processing room should be such as to provide a pleasant environment for the operators of the plant.

6. The Congress resolves that,
the disposal of dairy waste water has become a serious problem in most countries, owing to the trend towards centralization into larger units. Increased pollution of lakes, streams and canals has led to a general public demand for strengthened laws and regulations for the reduction of water pollution.

All possible measures should be taken by the dairies to minimize waste of milk and milk products.

Owing to its strong pollution effect and also to the high nutritional value of milk solids, the prime problem must be to prevent their discharge into water courses. This can be solved by vigorous propaganda to encourage the use of whey products at home and also their export abroad to countries short of food or cattle-feed.

IV.

1. The Congress proposes that small study groups be appointed with the following tasks :

a) For drawing up of an international terminology in the dairy economic sphere.

b) For composition of a systematic and detailed report on methods to compare and appraise the operational results in dairy plants.

c) For drawing up a survey of the transport problems at dairy plants from an economic viewpoint.

2. The Congress considers that :

a) in general, it appears advisable that all countries establish their standards according to their own local conditions while ensuring that the standard covers, as far as possible, both the production of the raw material (milk) and the products from it, and also that the product reaches the consumer in a wholesome condition.

b) the local standards will be the concern of the individual country, but for milk products which enter international trade, agreed standards and methods of testing should be adopted. It is recommended that this question of the international standardization be referred to the International Dairy Federation for further study.

V.

1. The Congress feeds that
it is desirable that, within the framework of the International Dairy Federation, the section for Tropical dairying, established in 1930, should be completely organized and begin to exercise its functions as soon as possible.

2. The Congress regards it as desirable that the International Dairy Federation take action with a view to facilitating, by means of exchanges of information and study missions, the development and organization of milk supply to thickly populated towns in the tropics.

B.

The final text of the resolutions which were passed on the basis of proposals presented by the International Dairy Federation is not yet available. It will be published in the next number of this Bulletin.

A new cooperative dairy-farm in France

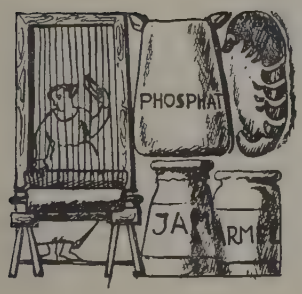
An example of a cooperative is given in France where a dairy-farm has been established for the joint management of a herd of 150 milch cows. This farm is located near a cooperative sugar-distillery works and a green pea cannery and will thus be able to utilize the by-products. The cooperative consists of 40 members and the registered capital is fixed at 300 shares of 25,000 francs each (two shares represent one cow). The cows will be tended by five cowherds and two assistants, and consequently the farmers will have more time available for other farm operations. Provision has been made to install mechanical milkers, a butter and soft-cheese dairy. The whey will serve to fatten a few hogs.

(Informations cooperatives, ILO, N° 4-5).

Milk target for 1952 reached in the United Kingdom

The United Kingdom's Ministry of Food Bulletin reports that the target set in the White Paper on European Co-operation published last December was for a 23% increase on pre-war production. This would mean the production of approx. 1,600 million gallons a year in England and Wales, which excluding the quantity consumed on farms, meant a production of about 1,460 million gallons for sale. Production for the year ended March 1949, was 1,425 million gallons but as production now was 16% above last year, by the end of May this year the U. K. would be producing milk at about 1,460 million gallons a year. There are about 60,000 to 70,000 more dairy cows on farms than a year ago.

Sir Thomas Baxter, chairman of the Milk Marketing Board has announced that in order to improve herds and increase milk production, a panel of honorary consultants has been formed comprising 14 scientists from six different countries.



The use of agricultural by-products. Furfural and its derivatives

M. Lemaire, Civil Engineer (' Arts et Manufactures'), has an article in the *Industrie Chimique* * on the properties, mode of preparation and uses of furfural and its derivatives. It was discovered in 1821 when processing oatmeal but oat chaff remained until 1921 a mere laboratory curiosity. Since then furfural has entered trade and today it has acquired such importance that oat chaff is no longer sufficient in the United States to satisfy the demand for furfural, and this is true also in the U.S.S.R. Already corncobs are used as an alternative raw material for preparing it as well as bagasse and cotton-seed covering, and, in the U.S.S.R., sun-flower seed-coats. It is said that the French West African groundnut shells could also be used.

The A. describes the composition of furfural : $C_5H_4O_2$ or C_4H_3O. CHO so that chemists may realize the innumerable uses to which this product and its derivatives (furfuryl alcohol, tetrahydrofurfuryl, furoic acid, etc.), could be put. The furfurol made in the U.S. by the Quaker Oats Co. is at least 99.5% pure; it is a neutral oily liquid, of a straw yellow to gold color, miscible with alcohol, ether, acetone, etc. It has a bactericidal power which is 26% of that of phenol, and at 2% stops the proliferation of yeasts.

Theoretically its preparation is easy, but in practice it offers difficulties because the steel autoclave required for heating the milled oat chaff has to be of enormous size as that material fills a great space at a low weight. Moreover, some of the copper parts of the autoclave are corroded by the liquid and have to be replaced from time to time.

Experiments have been made for extracting furfural from a great number of different kinds of vegetable waste, but so far only those mentioned are of economic importance.

The Author goes on to explain the process by which furfurol is formed, and then mentions its principal uses, *i.e.* in the manufacture of synthetic resin, as a solvant, it is practically irreplaceable as a solvent for crude pine-resin in refining lubricating oils; for purifying vegetable and animal oils ; and for refining butadiene a raw material used in the manufacture of synthetic rubber. Preparations of furfural containing mercury are used as sprays against the rot of several kinds of cultivated plants ; other compounds provide powerful disinfectants or germicides. When mixed with kerosene, xylene, or naphtha, furfural is an excellent preparation for destroying weeds in wheat fields. Asphalt for road facing is much improved by addition of a small quantity of furfurol or its resinous derivates.

During the last war the Germans, who have made a special study of furonic compounds, are said to have used either furfuryl alcohol or a mixture of which this alcohol was the base, as fuel for propelling their V1's and V2's. They also obtained by the use of hydrofurane one of the raw materials employed in making nylon. At the present time one can only use for making nylon (research by Du Pont de Nemours) furfural extracted from oat husks, corncobs, groundnut shells, etc. The rather costly process supplies however intermediate products that can be used for pharmaceutical purposes, vitamins, plasticizers for synthetic resins, and synthetic rubber of the GR-S type, obtained from petroleum. Such are some of the many possibilities offered by furfural and its derivatives.

* *Industrie Chimique*, nº 383 et 384, Paris, 1949.

Artificial manure

At present there is a fairly general reduction in manure production caused through the diminution in livestock numbers during the war, and through greater use of mechanized farm methods.

The problem raised by this reduction in manure supplies has stimulated research on artificial manures. Mr G. Demortier. Director, and Mr E. Boulle, ' Chef de travaux ', of the State Agricultural Chemistry and Physics Station in Gembloux, Belgium, have given their attention to this question and have published a brief article * on the results obtained from their recent experiments. These experiments are being continued.

It is now possible to produce a manure having all the qualities of farm manure.

Water (especially in the beginning), air and a temperature always definitely higher than the environmental atmosphere (heat produced by microbial fermentation) are three conditions essential for successful results ; in addition there must be a sufficient quantity of soluble nitrogenous compounds and the reaction should be neutral or slightly alkaline.

Under these conditions artificial manure can be prepared with a certain amount of liquid or farm manure, or with ammonium salts and lime, or with calcium cyanamide or special ferments.

First the straw should be well soaked in water ; whatever the material employed the procedure is the same in every case :
a layer of straw 30 to 40 cm. thick spread on the ground or on a platform is sprayed or covered with the material selected — farm or liquid manure, ammonium salts and lime (10 kg. of lime per ton of straw), or calcium cyanamide (25 to 50 kg. per ton of straw) ; further layers of straw and material are added until the heap is 1.80 or 2 metres high. If special ferments are used, the straw should be thoroughly impregnated and the heap piled up to 1.80 m. and packed down ; when the mass begins to heat (15-20°), a layer of 50-60 cm. is spread out and sprayed with the ferment at the dose indicated by the manufacturer and the process continued as above. The temperature may attain 60 to 70° C. in 24 hours.

The duration of the fermentation depends on the external temperature, in cold weather the heap should be covered.

The experimenters obtained a final product, brown to blackish in colour, ready for use at the end of 120 to 150 days with the first-mentioned products : with bacterial solutions the manure was in good condition after 90-100 days.

La fabrication du fumier artificiel. - *Revue de l'Agriculture*, Bruxelles, 2e Année, no 4, p. 359.

A new international silk organization

International meetings held in Zurich on 30 and 31 May 1949, attended by representatives of the professional categories of some twenty countries, resulted in the setting up of an International Silk Association.

This Association consists of 15 sections corresponding to the activities of silk production, processing and consumption. Each section works independently. The Association is directed by a President and a Board of delegates (one for each member country) and by the chairmen and rapporteurs of the 15 sections.

The headquarters of the International Silk Association will be established in Lyons, France.

(*Bollettino di Informazioni seriche*, N° 12, 1918 June 49).

Oporto wine

Port is a wine made from grapes grown in the Douro river valley, in a district demarcated by law, wherein certain geological and climatic conditions render its soil the ideal habitat of the vines that produce the most celebrated wine in the world.

This wine-region lies some 40 miles eastward of Oporto, the city in the North of Portugal, at the mouth of the river Douro, which gave its name to Port, Oporto wine — hence, by natural linguistic evolution, Port wine, or in abbreviation, Port, *i. e.*, the name by which is known the nectar from the Douro all the world over.

The domestic name is ' Vinho do Porto ' or ' Vinho Fino do Douro '.

The country in the Douro wine-region is exceedingly hilly, and the river flows westward through towering, often abrupt, ravines almost right down to its bar. The soil is mainly composed of friable schist rock, especially so in the best wine-growing localities ; — poor soil and very sparingly nurtured by rain the fall of which in the Port wine district is one of the lowest in Portugal.

Viticulture would be practically impossible but for the system of terraces built on the slopes of the rugged hills. The erection of new terraces and maintenance of old ones, the origin of some of which dates from time immemorial, represent a cyclopean and unremitting toil for the Douro labourer.

The climate is one of extremes : — very hot in the summer and bitterly cold in the winter. Often enough, in some parts of the Douro, the thermometer rises above 40 degrees centigrade (104° Fahrenheit) in the shade, at the peak of summer, and drops well below freezing point in the winter. These extreme temperatures play a vital role in the making of good wine. Most of the pests that afflict the plants are destroyed by the cold of the winter; on the other hand, the heat of the summer is instrumental in the proper ripening of the grapes. No wonder, then, that Port is regarded, and rightly so, as ' bottled sunshine '.

The grapes are usually gathered about the last week of September, when they have attained full maturity. The crushing takes place in granite tanks called ' lagares ', and throughout the process of transformation of the sugar into alcohol, which is closely watched, a given amount of grape brandy is added to the ' must ' in order to check its fermentation. The degree of sweetness of the wine is thus regulated. If, for instance, a dry, or bone-dry wine, *i.e.*, with a very small percentage of sugar content or none at all is desired, the fermentation of the ' must ' is allowed to proceed either to the point where the addition of grape brandy stops it or it stops automatically.

The colouring-matter is produced by the action of the alcohol on the pigments contained in the skin of the grape, which are thus dissolved ; hence, the more work given to the ' must ' the deeper the colour of the wine, which, after the final stage, is stored in wooden vats or casks and allowed to rest until spring. The low temperature of the winter helps to purge the wine of impurities and matter in suspension, which are precipitated and fall to the bottom of the receptacle.

A further amount of brandy is then added, in order to bring the wine up to the desired strength, which varies, as a rule, between 19 and 21 per cent by volume.

In the spring the wine is brought from the Douro, in casks, to the lodges at Vila Nova de Gaia, where it commences its long and hazardous career. And I say hazardous on purpose, for wine, being a live organism, is subject to countless accidents, and, therefore, requires the utmost attention and care during its developing process, and, particularly, in its infancy.

Both red and white Port are made in the Douro, the latter being the product of specially selected white grapes amongst which is the 'Muscat', which yields a luscious sweet wine known in the Trade by the name of ' Muscatel ', and is much to the liking of the gentle sex.

White and red Port, though grown in the same Douro district, present, nevertheless, distinct traits. The red is richer in acids, has more body, more ' fruit ' and, therefore, a more marked aroma than the white, which compensates for these shortcomings by a more refined elegance and more mellowness on the palate.

The production and marketing of Port wine are protected by what may be termed, without exaggeration, the most drastic legislation of its kind in the world. First of all, no Port can be produced outside the region which, owing to its peculiar agro-climatic features, embodies all the conditions rightfully considered as ideal for the breeding of the king of wines. This region, as already stated, is situated on the banks of the river Douro and of some of its tributaries, and was originally demarcated by the Marquis de Pombal in the middle of the 18th century.

This region yields, of course, wine of various grades. It is divided into two main sections — upper and lower Corgo.

The output of the vines in the upper Corgo is smaller than in the lower, and, therefore, the wine is of a finer structure. As a general principle it can be established that, given similar geological and climatic conditions, the smaller the production the better the wine.

The production of Port is strictly controlled. The directorate of the General Council of the Port Wine Institute, composed of the president of the Federation of the Wine-Growers of the Douro, otherwise known as ' Casa do Douro ' (Douro House), and a delegate of the wine-growers ; the president of the Port Wine Shippers' Guild ; ' two individuals of recognized prestige and competence in the economy of Port wine ' ; and the collector of Customs of the city of Oporto, determines every year, a couple of months prior to the vintage, the quantity of wine to be treated as Port, which is contingent upon the stocks held by farmers and shippers and the quantities disposed of in the previous year. The ' Casa do Douro ', in turn, specifies the properties or farms (' Quintas ') where the wine is to be made. Only the best wine of each district is allowed to be turned into Port.

Only the members of the Port Wine Shippers' Guild (' Gremio dos Exportadores de Vinho do Porto ') are authorized to carry on the business of Port shippers. To become a member of the Guild the following primary conditions must be complied with : –

a) ' to hold and maintain a stock of at least 150,000 litres of Port wine, in properly equipped lodges, which must have the necessary facilities and hygienic conditions, and be situated within the area of the ' Entreposto de Gaia ' ;

b) the selling and exporting capacity of each shipper to be determined by the ratio between the quantity of wine made at the vintage and the quantity exported during the preceding year, applied to the stock held on the 30th of June '.

The ' Entreposto de Gaia ' is constituted by an area, on the south side of the river Douro, just opposite Oporto, where is stored all Port wine for trading purposes, outside the demarcated region in the Douro.

The connecting link between the ' Casa do Douro ' and the Port Wine Shippers Guild, is the Institute of Port Wine, an official body of economic co-ordination. Its chief functions are : –

a) to control the stocks at the ' Entreposto ', from both the quantity and the quality standpoint ;

b) to supervise all shipments ;

c) to issue certificates of origin.

The control of the stocks at Gaia is exercised by means of current accounts with the shippers, wherein is entered or written off all the wine received from the Douro and sold in the domestic market or shipped abroad.

For the purpose of controlling the quality and physico-chemical composition of the wine, the Institute has at its service a chamber of duly qualified tasters and disposes of up-to-date and well-equipped laboratories. The chamber tastes ' blind ' samples of all wines received and sold by the shippers ; in the laboratories they are analysed and tested. If the wine is not approved by the official tasters, in other words, if the quality thereof does not respond to a minimum standard set up by tradition, or if its organoleptic characteristics, alcoholic strength, sugar content, total and volatile acidity etc. are not within the pattern established by tradition and enforced by law, the wine is rejected, *i.e.*, it cannot be received in the lodges or traded. Wine rejected by the Institute is — in almost every case — distilled. Should the farmer or the shipper not agree with the tasters' verdict, he may have recourse to the ' Junta Consultiva ', a body composed of 3 reputable tasters from the Trade, whose decision is final. All the tasting — let it be stressed again — is ' blind '. in other words, the tasters, whether belonging to the official chamber or to the Junta, have no idea whatsoever as to whose wine they are appraising. The only identification mark on the bottle is a serial number affixed by the head of the respective department.

Wine sold in the domestic market (and only bottled wine is legally authorized) is duly protected by a Seal of Guarantee issued by the Port Wine Institute, exclusively in respect of wine responding to a minimum quality standard, and pasted, on or underneath the capsule, on the bottle neck. No Port may be sold in Portugal which does not bear this seal of guarantee, and no Port may be shipped abroad which is not covered by a certificate of origin, which vouches for its genuineness.

(*From* LET'S TALK ABOUT PORT *by Valente Perfeito — a publication of the Instituto do Vinho do Porto*).

The agreement between FAO and OIV

The sixth session of the Council of FAO approved the contents of the communications in which the Director General and the International Wine Office (OIV) agreed on the principles that should regulate henceforth the relations between the two organizations. At the meeting held on June 24, the representative of OIV gave a brief account of the discussions and conferences that led to this agreement and emphasized the economic and social importance of vineyards and of grape and wine production. He pointed out that he had drawn the attention of FAO to wine as ' a sound wholesome drink which is an item in the regular diet of very large populations ' and which may certainly be included among the products that can assure the peoples of the world a more plentiful and more wholesome diet.

Protection of viticulture and international publicity campaign in favour of wine

The protection of viticulture and international publicity campaigns in favour of wine were the subject of study at the XXVIIIth plenary session of the OIV Committee held in Paris from 11 to 13 July, 1949. After referring to the motion presented to the first 1946 session, suggesting that the scale of production of the vineyards be supervised in each country so as to avoid over-production, that costs of the products of the vine be reduced, by improving the methods of cultivation, and that the situation of the wine market be improved by the elimination of excessive taxes and dues, it was pointed out that these recommendations are now more valuable than ever. Attention was called to the fact that the yield of wine has been considerably improved during the last three years, but that the wine trade is passing through a period of serious depression chiefly owing to the disfavour into which wine has fallen with the public as a result of war penury, high prices, low purchasing power, and last but not least the poor quality of much of the wine. Export difficulties, customs duties, and excise duties are likely to make the situation yet more serious.

In order to remedy this situation it is thought necessary first of all to reassert a policy for raising the quality of the wines, both in the case of name-brand wines and of the ordinary beverage wines. It would be advisable to establish the normal composition of wines fit for consumption, and an efficient control should be excercised over the plantation of new vineyards, both to protect quality and to avoid the risk of their excessive extension. The Governments concerned were advised of the urgent need of a considerable reduction of the taxation now levied on wine (taxes and customs duties).

A publicity campaign on an international scale should avail itself of all that has been written on the value of the use of wine. The Bulletin of the OIV, whose articles are often reprinted in the press, makes a useful contribution to this publicity campaign, as do also the prizes given by OIV. Propaganda in favour of the consumption of wine should also be conducted on a national scale. In several countries there are already organizations set up for this purpose, and direct action should also be taken by generalizing in hotels and restaurants the use of 'meals, wine included'. Medical propaganda in favour of wine should also be extended, by showing that a proper use of wine is one of the surest means of avoiding the excessive use of strong liquors.

ECONOMICS AND MARKETS

Trade Agreements

AUSTRIA (*see also* GREECE)

Austria and **western Germany** have agreed to extend their trade agreement to include not only the Bizone but the Trizone.

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The existing trade agreement between **Austria** and the **Bizone** will be extended to the three western German occupation zones. The volume of trade between 1 July 1949 and 30 June 1950 has provisionally been fixed at 50 million dollars in each direction. Western Germany will deliver chemicals, machinery, steel and iron goods as well as potash, whereas Austria is to deliver magnesite' aluminium iron and steel products and paper goods.

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A trade agreement between **Austria** and **India** was drawn up at the beginning of August. This agreement provides for an exchange of goods to the value of 4.5 million pounds sterling, a slight increase over last year.

Austria will supply steel, printing-paper, textile products and chemicals in exchange for various raw materials, cotton, hides and tea.

BELGO-LUXEMBOURG ECONOMIC UNION (*see also* FRANCE, GREECE)

A trade agreement to cover one year was drawn up on 23 April 1949 between the **Belgo-Luxembourg Economic Union** and **Spain.** The Union will provide draught and breeding horses (for a value of 20,000 Belgian francs), eggs (6,000 B. fr.), hops (5,000 fr.), maize starch, leathers and leather goods (11,000 fr.), paper pulp and paper (3,200 tons), other papers and paper goods (9,000 B. fr.) chemical and pharmaceutical products, wooden crates for packing oranges (3,100 tons) other papers and papes goods (9,000 B. d.) (600,000), various textile products (34,000 fr.), stone-work, precious and base metals; machinery and equipment including different farm machines, machines for the sugar, brewery, dairy and canning industries (20,000 fr.), wine-presses, equipment for processing palm fruits, farm tractors, colonial products (castor seed, cassava, palm kernels, fibres, etc.), oleaginous products which will be exported to Spain up to the value of 15 million Belgian francs, to balance Belgian Congo imports of dried fish. 'Reciprocal quotas' include salted guts, growing plants, medicinal plants and other products.

Spain will export 55,000 tons oranges and tangerines, 10,000 t. lemons and grapefruit, 3,000 t. apricot pulp, hazelnuts, almonds, 30,000 hl. beverage wines, 10,000 hl. sweet wines, 3,000 hl. Jerez, 5,000 t. bananas, 10,000 Belgian fr. canned fish preserved in oil, 10,000 fr. dried fish, 8,000 fr. fruit preserves, 5,000 fr. fresh fruit, 10,000 fr. fruit juice, 1,000 tons olive oil and vitaminized oil and different foodstuffs to the value of 20,000 fr., 1,000 cubic metres plywoods and walnut veneer, cork and cork goods, leathers, mineral products, chemicals.

BULGARIA

A trade and payment agreement was signed on 18 May between **Argentina** and the **Popular Republic of Bulgaria.** This agreement contains a clause of strict reciprocity of treatment between the two countries as regards importation facilities

and foresees the purchase by Bulgaria within one year of the agreement's coming into force of the following goods (total value $ 8,000,000): ox hides ($ 2,800,000), wool, washed and in grease ($ 2,500,000), quebracho extract ($ 1,200,000), edible oils and linseed oil ($ 1,000,000), casein, fertilizers and other products ($ 500,000). During the period Bulgaria will export to Argentina coal, wood, rice, cement, machinery, minerals, chemical products of tobacco and its by-products, to a total value of $ 5,500,000 and $ 500,000 worth of other products.

Payment will be effected in dollars.

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On 9 April 1949 a trade agreement was signed at Sofia between **Bulgaria** and **Poland.** The amount of goods to be exchanged will amount to 8 million U. S. dollars on either side. This figure represents an increase of 60 per cent. over the amount fixed in the previous agreement of 1947.

Poland will mainly provide foundry and metal products, chemicals, glasswork, chinaware and pottery, electric and railroad equipment, textiles. Bulgaria will export to Poland various foodstuffs and agricultural raw material, copper, chromium.

CZECHOSLOVAKIA

An additional Protocol to the **Czechoslovak-Argentine** trade agreement was signed on 29 July 1949 at Buenos Aires in order to establish the new lists of goods which are to be exchanged between the two countries for a period of one year beginning 13 August 1949. The volume of goods exchanged by each contracting party will amount to 1,450 million Czechoslovak crowns, corresponding to 100 million pesos.

Czechoslovakia will export to Argentina steel and iron goods, machine and electric equipment, farm machinery and tractors, pumps of all kinds, precision instruments, aero-motors, typewriters, surgical instruments, rock-crystal, chemicals, cotton fabric, linen, rayon, yarn, sporting-guns, etc.

Argentina will mainly supply Czechoslovakia with wheat and maize, frozen meat, hides, wool, quebracho extract, oilcakes, linseed oil, lard, edible suet, meat meal, horsehair, bristle for brushes.

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A fresh trade agreement was drawn up between **Czechoslovakia** and **France** on 26 March 1949 in Paris to supplement the agreement of 6 August 1948. By the new agreement some quotas are increased and further products are added to the list previously established.

France will furnish 40,000 tons of edible potatoes, 1,000 t. pork and olive oil. Quotas will be increased for various chemicals, roller-bearings, machine-tools, engineering equipment, pharmaceutical products, synthetic tannin, unexposed films, celluloid, silica.

Czechoslovakia will provide 1,050 tons chicory root, 750 t. roasted chicory, formic acid, grindstones, laboratory chemicals, creosoted phenol, malt (500 hl.), beer (1,500 tons), preserves (10 million fr.), cellulose pulp, lithopone, liquid chlorine, different chemical products, wrapping paper, esparto, cotton fabric for overalls, cloth and rubber footwear, household enamel articles, motor cycles with cylinder capacity of 350 and over, sewing-machines, buttons, glass, sports ammunition, tannin products, printing and other equipment.

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On 29 March 1949 a trade agreement was signed by **Czecoslovakia** and the **Indian Union** at New Delhi. This agreement is valid up to 31 December 1949. India will export products to the value of 17 million rupees including raw jute, manganese ore, sillimanite ore, leathers and hides, oilseeds, vegetable oils, pepper, lac, coir and palm fibre, mica, tea.

In exchange, Czechoslovakia will export industrial equipment to the value of 33 million rupees.

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On 10 March 1949 a trade agreement was concluded in Prague between **Czechoslovakia** and **Norway.** The agreement covers the period from 1 March 1949 to 28 February 1950. The value of the goods exchanged is expected to amount to 1 milliard 40 million Czechoslovak crowns.

Norway will supply, *inter alia*, fish, fats, fish meal, fatty acids, alcohol, iron alloys, silica and other merchandise in exchange for textiles of all types, pottery, glassware, footwear, metal products, electric equipment, buttons, zip fasteners, hops, sugar and other commodities.

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Under an agreement between the **Czechoslovak authorities** and the **Commonwealth Bank of Australia.** Czechoslovakia is to receive a credit of one million pounds to finance wool purchases for the 1949-50 period. Last year's credit was 500,000 pounds.

DENMARK (*See also* GREECE)

A trade agreement was signed by **Denmark** and **Hungary** on 2 March 1949. Denmark will export 2,850,000 crowns' worth of machine-tools and machinery for road construction, 1,200,000 crowns cryolite, 1,700,000 crowns penicillin, 4,850,000 crowns agricultural commodities, non-ferrous metals, electric equipment and other goods in exchange for typical Hungarian merchandise for an equivalent value.

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An agreement was signed between **Denmark** and **Iceland** at Reykjavik on 17 June to remain operative until 30 April 1950. Iceland will export to Denmark, for a value of 22 million crowns : herring meal and oil (10 million crowns), salted fish (20,000 barrels), dried fish (500 tons), skeepskins (1,500,000 crowns), cod liver oil and stearin (2.5 million crowns), wool and yarn, guts, etc.

Denmark will supply to Iceland : 400 tons butter, 200 t. sugar, 1,000 t. rye flour, 20,000 t. cement, machines and different apparatus, iron and steel goods, telegraph and telephone equipment, etc. The difference in the exchange is represented by about 1.5 million crowns of Danish assets for which transfer will be authorized.

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A trade agreement between **Denmark** and **Italy** was signed on 18 June 1949. This agreement provides for an exchange of goods over a period of one year beginning 1 June 1949.

Italian exports will include : oranges and tangerines (3.5 million crowns), lemons (3 million cr.), hulled almonds, walnuts and hazelnuts (3 million cr), beverage and sparkling dessert wines (4.5 million cr.), raw and processed cork (1 million cr.), fruit pulp (400,000 cr.), vegetable seeds (300,000 cr.), fruit juice (200,000 cr.), tree seed, liquorice root and juice, tomato sauce, living plants, pickled citrons, canvas, cotton fabric, wool, rayon felt and straw for hat-making, almond oil, essential oils, pigment earths, buttons, marble, auto-machines and spare parts, pottery, etc. A special permit will be issued for the export of forage seed, aromatic herbs, rice (2,000 tons), raw and carded hemp, sulphur, leaf tobacco, asbestos and other products.

Denmark will supply to Italy : 15,000 t. of seed potatoes, 5,000 head of beef cattle, 2,000 head farm animals, dressed poultry (3 million cr.), eggs (4 million), salted salt-water fish (34 million cr.), dried fish (7 million), fresh-water fish and trout fry (1 million), fresh-water fish and net fish (11 million). A special licence will be required for the importation into Italy of 750 tons of butter, horses (8 million cr.), barley, rye, oats, malt, forage seed (2 million), vegetable and tree seed, meat and frozen pork (500 tons), casein (2 million cr.), cheese (1 million cr.), preserved fish in oil and tomato sauce (3 million), condensed chicken soup, machinery and spare parts for the cement industry, machines and iron and metal goods, pharmaceutical goods, handicraft and other goods.

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A trade agreement between **Denmark** and **Norway** was concluded in Oslo, effective from 1 April 1949 to 31 March 1950. Goods to the value of 330 million Norwegian crowns will be exchanged. Norwegian supplies, amounting to 180 million crowns, will include nitrates (245,000 tons), pyrites (82,000 t.), woodpulp (25,000 t.), whale oil (11,500 t.) newsprint (for a value of 14 million crowns), other paper and paperboard (20 million crowns), herrings (15 million crowns). Denmark will furnish, among other goods for a total value of 150 million crowns, 35,000 tons sugar, 30,000 t. rye, 1,500 t. pork ; 15,000 tons superphosphates, and machines and apparatus to the value of 40 million crowns.

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An agreement replacing that of 1948 has been concluded between **Denmark** and **Yugoslavia** for the period from 1 April 1949 to 31 March 1950. The volume of Yugoslav supplies has been fixed at 13 million crowns. These supplies will consist mainly of timber, railway sleepers, hops, hemp, maize starch, lead, magnesium. Part of the Yugoslav exports will redeem debts already due and incurred for machines and equipment provided by Denmark for manufacturing cement. According to the new agreement Danish goods will only amount to 6 million crowns and will comprise machinery, apparatus, engines, cryolite, insulin, vegetable and animal oils, margarine and pasture seed.

FINLAND (*see also* NETHERLANDS)

A trade agreement was concluded between **Finland** and **Colombia** on 22 March 1949. Finland undertakes to purchase Colombian coffee at the international price to the amount of 3 million dollars in exchange for woodpulp and semi-prepared paper, for an equivalent value.

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A trade agreement was signed by **Finland** and **France** in Paris on 5 May 1949 to replace that of April 1948. Goods to the value of 11 million francs will be exchanged by both contracting parties. Finland will furnish timber, woodpulp, cellulose and paper in exchange for iron, steel, fertilizers, chemicals, electric equipment, wine and liqueurs.

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A trade agreement between **Finland** and **Iceland** was signed on 20 May 1949 and will remain operative until 30 June 1950. The volume of goods exchanged will amount to 1 million pounds sterling.

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On 9 May 1949 **Finland** and the **Indian Union** signed a trade agreement which provides for Indian exports of tobacco, tanned hides, rubber products, tea, coffee, lac, coir-fibre products, groundnuts and groundnut oil, castor oil, various oilseeds, cotton yarn, chemicals and pharmaceutical products.

Finland will supply equipment for paper-mills and plywood-mills, wood pulp machines, boilers, electric equipment, different papers, softwood, railway sleepers.

Trade transactions will be effected on a private basis, use being made as far as possible of the shipping facilities of both countries.

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A trade agreement between **Finland** and **Sweden** in force from 1 April 1949 to 31 March 1950 provides for the delivery from Sweden of goods for a total value of 58 million crowns. Finnish exports will amount to about 54 million crowns. Finland will also furnish supplies of roundwood, the amount of which has not yet been fixed.

Swedish exports will include iron ore, rolled iron, machinery, telephone and telegraphic equipment, motor bus and lorry chassis, motor and engine spare parts, while Finnish exports will consist mainly of foodstuffs, pork, cheese, sawn and dressed lumber, textiles, porcelain, cast iron, copper goods, machinery and apparatus.

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A 12,500,000 dollar loan has been granted to **Finland** by the International Bank for Reconstruction and Development. The amount will be used primarily for providing Finland's woodworking industries with modern equipment.

It is expected that the new equipment will make it possible to produce additional timber exports of about 100 million dollars a year by 1953.

FRANCE (*see also* CZECHOSLOVAKIA, GREECE, HUNGARY, IRELAND)

A trade agreement which was concluded between **France** and the **Belgo-Luxembourg Economic Union** on 28 July 1947, was extended to 30 June 1949. The French export quotas (List A) were increased by a twelfth.

The Economic Union supplied France with copper, zinc scutched flax, cord, textile machines, calcium carbide, leather for the hat-trade, copper sulphate, iron and steel goods, etc.

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According to the agreement signed between **France** and **Greece** on 10 December 1948 Greece is authorized to draw on the amount of 5,000,000 dollars for the following merchandise : railroad equipment, tinned fish, horses and mules, chemicals, steel and steel products, farm machinery, tractors, motorcar chassis, scientific instruments.

Transactions will be effected in French francs. The agreement is to remain in force for one year.

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A trade agreement between **France** and **Iran** to cover one year was signed in Paris on 12 July 1949, each country to exchange goods to the value of 1,916 million francs. France will supply vehicles, chemical and pharmaceutical products, electric equipment, machinery (agricultural and other, tractors, cigarette paper, perfume, glassware, etc. in exchange for oil seeds, (350 million fr.), rubber and resin (110 million fr.), raw wool (200 million fr.), raw and semi-treated ox and goat skins (200 million fr.), dried fruit (150 million), raw cotton (50 million), raw silk (cocoons and waste, 40 million fr.), carpets (300 million), hog-bristles, non-ferrous metals, etc.

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A customs agreement between **France** and **Italy** was signed on 26 March 1949 by which first the customs barriers between the two countries will be suppressed, while quota regulations will be abolished later.

An additional Protocol to this customs union treaty was signed by the two countries on 29 July 1949 with tne object of rendering the application of this agreement conformable to the main principles of the European Economic Cooperation Organization.

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A trade agreement concluded between **France** and **Italy** on 8 June 1949 became operative on 1 July 1949 and will terminate on 30 June 1949. French exports will include seed potatoes (10,000 tons), cod (8,000 t.), fresh and frozen fish (5,000 t.), olive oil (3,000 t), cottonseed (2,000 t.), cacao beans (2,000 t.), kapok (1,500 t.), canned fish (1,200 t.), grass-seed (1,000 t.), raphia (1,000 t.), cassava (1,000 t.), cereal seed (1,000 t.), tapioca (1,000 t.), horses, mules, breeding cattle rams, ewes, boars and sows, eggs, (48 million fr.), pulses (100 million fr.), dates (300 million fr.), salted guts (20 million fr.), champagne (40 million fr.), bottled brandy (40 million fr.), coal, iron ore, industrial earths and sands, phosphates (700,000 t.), hyperphosphates (15,000 t.), scrap-iron, cast steel, machines for the printing textile, chemical industries and cardboard manufacturing, perfumes, tulles, etc.

Italy will furnish table rice (10,000 t.) and seed rice (1,000 t.), oranges and tangerines (25,000 t.), lemons (12,000 t.), raw and worsted hemp (5,000 t.), unmanufactured tobacco (3.000 t.), fresh vegetables (5,000 t.), fresh fruit (2,000 t.), almonds (2,500 t.), confectionery chestnuts (1,200 t.), hemp waste (200 million fr.), crop seed (390 million fr.), dried figs (110 million fr.), vintage wines (60 million fr.), Asti wine (40 million fr.), quality canned products, confectionery, tanned goat-skins,

hides, cotton and silk yarn and fabric, nitrogenous fertilizers (9,000 t.), sulphur (60,000 t.), calcium carbide, ore and zinc metal, artificial fibre thread and fabric, rice-mill equipment, tractors, electric equipment, silk fabric, handicraft products, textile machines, other machinery tyres, films, etc.

The quotas listed of imported Italian products will be divided between France and French territories in North Africa and Overseas.

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The **Franco-Netherlands** Joint Committee signed a note providing for a supplementary trade exchange between France and the Netherlands to the value of 5 milliard francs each way and to cover the period 1 May to 31 July 1949.

On 3 August 1949, in Paris, the governments of France and the Netherlands signed a trade agreement to be valid from 1 August 1949 to 30 June 1950. The Joint Committee will oversee its application, and settlement for goods exchanged will be made according to the payment agreement of 9 April 1946.

French exports to the Netherlands will include : phosphates (440,000 tons), agricultural products, live animals (10 million francs), cut flowers (50 million francs), citrus fruits (60 million fr.), cocoa (6,000 tons), horticultural products, vegetable and forage seeds, raffia, kapok, special foodstuffs, wines and spirits (660 million fr.), oil cake, raw tobacco from French North Africa, marine and rock salt, clay, iron ore, chemicals, pharmaceutical and perfumery products, leathers and skins, French wood (84,000 m^3) and colonial wood (about 17,000 tons rough timber) (about 5,400 tons Okoumé), veneer (1,500,000 m^3), wool and wool yarns, silk fabrics and other fashionable products, glassware, metallurgical iron and cast iron products, various tools and machinery, motor cars. Exports to Netherlands overseas territories will include : phosphates (20,000 tons), wines and spirits (100 million fr.), silk fabrics, paper, motor cars, etc.

Netherlands exports to France will include : 30 million eggs, 2,500 head of cows and heifers registered in the Herdbook, 2,000 head of slaughter goats, 20,000 tons of mussels, salted herrings, fresh sea fish (160 million fr.), butter (8,000 t.), cheese (6,600 t.), seed potatoes (70,000 t.), cereal seed (8,000 t.), copra (6,000 t.), starch, flowering onions, seed flax (4,000 t.), tea, (300 million fr.), forage seeds, beetroot, pulses osiers, rattan, sisal, biscuits, Indonesian tobacco (400 million fr.), peat, mineral oils, vitamins, pharmaceutical products, anti-aphthous vaccine (4,000 litres), creosote oil, rubber (10,000 t.), leather, wood pulp, paper, binder twine, ores and cast iron, non-ferrous metals, radioelectric and industrial material, coke (240,000 t.), etc. Exports to North Africa will be : cows and heifers registered in the Herdbook (700 head), condensed milk, (4,500 t.), binder twine, fillets of fish, beer (2,000 hl), paper, cotton goods, etc. ; and to French overseas territories : condensed milk (4,500 t.), cheese, butter, beer (20,000 hl.), paper, cotton goods, oilworks material, Indonesian tobacco, various tools and machinery, etc.

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A **French-Portuguese** trade agreement drawn up on 1 June 1948, which lapsed on 31 May 1949, was extended up to 30 September 1949. Import and export quotas were increased by a third.

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A trade agreement supplemented by a financial protocol was signed by **France** and **Switzerland** in Berne on 4 June 1949, to cover a period of one year beginning 1 June 1949. The two governments will issue import licences for certain quotas of products important for the economy of the two countries.

France will furnish agricultural produce and foodstuffs (oats, barley, pulses for seed, fresh and preserved fruit and vegetables, early produce, salt, hops, colonial agricultural products, olive oil, preserved meat, eggs, fresh and canned salt-water fish, canned goods, wines, liqueurs, horses and mules, pork, breeding rams, feathers, bone-meal, leathers, forage, oil-yielding and truck crop seed, beets, cut flowers, straw, hay, vine slips, bulbs, wood, paper and prints, textiles, footwear, hosiery, raw phosphates, potassic fertilizers, quarry stone, millstones, special cements, talc, cryolite, coal, coke, glassware, iron, steel, railway material, tools, weapons, gold and silver articles, tractors, motor winches, power cultivators, vehicles, telephone, photographic, wireless, cinema and television apparatus, clocks and watches, drugs, chemicals, dyes, unmanufactured tobacco. Switzerland will export to France horses, bulls, cows, goats, pigs, bees, fresh-water fish, dairy products, fresh vegetables, dietary foods, fortified beverages, industrial chemical products and plastic material, rubber, leathers and hides, skins, textile fabrics and goods, timber and wooden articles, tungsten, iron and sheet-steel, pig-iron, aluminasiliceous alloys, semi-finished metal and alloy products, cocks and valves, bearings, etc., electric machines and equipment, transport equipment, scientific apparatuses, watches.

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On 21 February 1949 a supplementary agreement to the agreement of 16 December 1948 was signed by **France** and the **Trizone**, with a view to increasing by $ 7,953,000 the volume of goods exchange.

As this trade agreement expired 30 June 1949, a new one has been signed by the French Government and the 'Commanders-in-Chief' of the Three Zones in Germany, to be in force from 1 July 1949 to 30 June 1950.

Exports from the franc zone to the three Western Zones of Germany will include : (among food and agricultural goods) bread grains ($ 6 million), live and slaughter animals ($ 8 million), lard ($ 6 million), palm-nuts ($ 4 million), grain seed ($ 3 million), cheese ($ 2 million), whole powdered milk ($ 2 million), eggs ($ 2 million), dried vegetables ($ 5 million), dried fruits ($ 3 million), cocoa beans ($ 2,5 million), fresh fruits and vegetables ($5,5 million), citrus and tropical fruits ($ 2 million), wines and spirits ($ 2,5 million), olive oil ($ 2 million), refined tapioca ($ 1,5 million), meat and fish meal ($ 1,2 million), concentrated pulp and fruit juice ($ 1 million), industrial apples (1 million), and in lesser quantities, oil-cake, palm-oil, grafts of wine and fruits-tree, preserves, honey, horticultural products ; and various other agricultural and alimentary products ($ 2 million) : (among other types) ores and iron and iron-working products, non-ferrous metals, wood from the colonies ($ 1,130,000), other wood, fibres and papers, chemical products, phosphates ($ 6,500,000), wool and woollen blouses ($ 3,5 million), combed and carded wool yarn (5,150,000), wool and cotton fabrics, various textile products, skins and leathers, rubber articles, stone and earths, electric material, industrial equipment, precision instruments, etc.

Exports from the three Western Zones to the franc zone will include, chiefly : chemical products, industrial equipment, stone and earths, wood (pit-props, $ 2.5 million, sawn wood for posts and cross-bars, $ 1 million worth of other articles in wood and paper), cotton goods ($ 2 million), rayon ($ 1,2 million), and other textiles, iron metallurgical products, metal articles, transport material, precision and optical instruments : and in the category of food and agriculture, hops ($ 1 million), sugar beet seed ($ 200,000), seeds, beer, horticultural products, breeding animals and animals for zoological gardens, mineral waters.

GREECE (*data supplied by the Greek Ministry of Agriculture, transmitted by the Greek National FAO Committee*)

By the **Greek-Austrian** trade agreement authorization has been given to draw on the amount of 400,000 dollars in Austria. The goods authorized to be exported include unfinished paper, paper pulp, wood.

Transactions will be effected in pounds sterling. The agreement signed on 14 January 1949 expires on 13 January 1950.

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The total amount entailed in the trade agreement signed by **Greece** and the **Belgo-Luxembourg Economic Union** on 27 December 1948 is 714,937,500 Belgian francs, comprising 72,870 B. fr. representing Greek exports to Belgium and 642,067,500 B. fr. the imports from the Union. The difference – 13 million dollars – represents drawing rights on the Belgo-Luxembourg Economic Union.

Exports from the Union to Greece include Ardennes horses, hops, mineral oils, mineral colours, nitrogenous fertilizers, various chemicals, worsted or carding wool, rolled steel.

Greece will export to the Union raisins, dried figs, wines, sponges, different metals and other goods.

This agreement which expired on 30 June 1949 is renewable. Transactions are billed in Belgian francs.

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According to the trade agreement in force between **Greece** and **Denmark** drawing rights on Denmark amount to 2,000,000 dollars in Denmark. Imports include tinned meat, cheeses, milk powder, eggs, salted cod, different machinery, chemicals, table potatoes, seed.

Greek exports comprise tobacco, sponges, dried fruit, mastic, wines and certain pharmaceutical products.

The goods will be billed in Danish crowns. The agreement was signed on 25 February 1939 and remains operative for one year.

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Another trade agreement * was signed by **Greece** and **France** in Paris on 6 August 1949 for a period of one year beginning 5 July 1949. The import and export transactions will be settled according to the terms of the payment agreement of 24 April 1946 amended on 5 July 1949.

Greek exports to France will include 15,000 hl. of dessert wines, Samos wines (20 millions francs) leaf tobacco (6,000 tons), oranges (3,000 tons), sultana raisins (2,000 t.) zinc ore, emery, magnesite, vallonia, paper waste, rawhide, medicinal plants, currants, levant stone. French exports to Greece will comprise 400 head of horses and mules, seed potatoes (a minimum of 3,000 t.) malt (1,000 t.), cocoa (500 t.), dried, salted or smoked fish (300 million francs), preserved foods (100 million francs), spices (20 million fr.), wines and champagne (20 million fr.), various foodstuffs (25 million), vegetable seed (10 million), raw or processed gums and resins (10 million), vegetable products such as raphia, palm fibre, osier (25 million), glycerin and beeswax (25 million), mineral products, phosphate (60,000 t.), inorganic and organic chemical products, parachemical industrial products including insecticides, parasiticides and fungicides and auxiliary products utilized in the textile and leather industries, secondary products of cellulose, rubber,

* Editor's note : This agreement is subsequent to the information supplied by the Greek National FAO Committee, and it was therefore thought advisable to add it to the Greek document.

leathers and hides, veneering wood, plywood, wooden articles and parquet (50 million fr.), colonial woods except peeled veneer (20 million fr.), paper of different types, textiles including 400 million francs worth of worsted and carding wool, woollen fabric (300 million fr.), 100 million francs of cotton, silk and rayon fabric, manufactured clothing, glassware, metals, metal goods, machinery transport equipment, scientific instruments, lectric equipment, sundries.

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A trade exchange agreement between **Greece** and the **Western zone of Germany** was signed on 1 January 1949 and lapsed on 30 September 1949. This agreement covered the exchange of goods to the total value of 18,083,000 dollars, of which 10,083,000 dollars represented German exports to Greece and 8,000,000 dollars Greek exports to western Germany.

Drawing rights amount to 4,400,000 dollars. The goods imported from Germany included chemicals, hides, textiles, timber, paper pulp, metal and steel goods, scrap iron, while Greek exports comprised dried fruits, wines, citrus fruits, tobacco, chemicals, hides and ore.

The goods exchanged were invoiced according to the specifications of the payment agreement in force.

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Under the terms of the **Greek-Italian** agreement, the value of the Italian merchandise to be exported into Greece will total about 13,500,000 dollars as against some 6.5 million dollars of Greek products which can be exported to Italy.

The difference, 7,000,000 dollars, represents the Greek drawing rights on Italy, by virtue of the European Payments and Compensations Agreement of 16 October 1948.

Italian exports will consist mainly of breeding animals, agricultural produce, rice seed, table rice, vegetable seed, pharmaceutical plants, condensed milk, cheeses, wood and leather, machinery, electric equipment and apparatus.

Greek exports will chiefly comprise raisins, cigarettes, tobacco, olive oil, chromium, bauxite, turpentine, sheep-skins.

Transactions will be carried out in U.S. dollars. The agreement was signed in Rome in August 1949 and become operative on 15 April 1949 lasting up to 14 April 1950.

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Drawing rights between **Greece** and the **Netherlands** amount to 5,000,000 dollars. They concern exports from the Netherlands comprising mainly evaporated milk or milk in powder, cheeses, eggs, breeding animals, telephone equipment, electric equipment, textiles.

Transactions will be effected in gulden. The agreement was signed on 25 January 1949 and will expire on 24 January 1950.

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A trade agreement has been drawn up between **Greece** and **Norway** covering drawing rights to the amount of 2,000,000 dollars. Norway will export cod, herrings, preserved fish, fish roe, nitric acid, calcined soda, paper pulp and chemicals. Greece will supply bauxite, kaolin, chromium, tobacco and raisins. The agreement was signed in Oslo in February 1949 and will expire on 31 December 1949. Transactions will be effected in U.S. dollars.

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The agreement which regulated the trade relations between **Greece** and **Sweden** established that the drawing rights on Sweden would amount to 5,000,000 dollars. Imports from this country comprised considerable quantities of timber, paper pulp (chemical and industrial), paper, special steels, telephone equipment, matches, and exports to Sweden consisted of tobacco only.

The agreement, signed in Stockholm on 21 March 1949, expired on 30 June 1949. Exchange transactions were effected in Swedish crowns.

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The trade agreement between **Greece** and **Turkey** provides for the exchange of goods to the value of 21,610,000 dollars, comprising 17,305,000 dollars of imports from Turkey and 4,305,000 dollars exports to this country. The difference of 13 million dollars corresponds to Greek drawing rights on Turkey.

Imports from Turkey will mainly comprise oxen and buffaloes, sheep, goats, fresh, or salted fish, beans, cheeses, cottonseed, heliotrope, eggs, raw cotton and other products in smaller quantities.

Exports will mainly consist of cement, glass-panes, red lead, cotton goods.

The agreement was signed and became operative on 2 April 1949. Transactions will be effected in U.S. dollars. The agreement remains in force for one year.

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Greece and the **United Kingdom** have not signed a bilateral agreement, but a special agreement was made between the two countries in November 1948 by which the United Kingdom granted Greece drawing rights to the value of 10,000,000 dollars.

The goods will be invoiced in pounds sterling. The United Kingdom announced later that it had agreed to increase orders for a sum amounting to 13.7 million dollars.

Neither the United Kingdom nor Greece are in any way bound by the said agreements to import or export products nominated in a specific list, and consequently the importation from the United Kingdom of all goods, unless specially prohibited, is authorized.

HUNGARY

Following negotiations between the two governments it was decided to extend the validity of the trade agreement between **Hungary** and **France**, up to 31 October 1949. No increase in quotas was contemplated.

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The trade agreement existing between **Hungary** and **Western Germany** has been extended for a period of two months. The most important item to be exported from Hungary to Germany is rye. Quantities of paprika and other agricultural produce as well as machine tools are to be increased.

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It was agreed on 17 April 1949 to extend up to 31 December 1949 the clearing agreement concluded between **Hungary** and **Norway** on 27 August 1946.

Hungary will mainly supply cereals, feathers and down, pharmaceutical products, electric equipment, wireless sets, textiles, sheepskins, and optical instruments in exchange for fish and fishery products, crude iron and iron alloy, mica and chemicals.

IRELAND

The 1948 trade agreement between **Ireland** and **France** has been renewed for another year. In addition to the quotas agreed upon, Ireland will supply raw wool, beer, smoked fish, abrasives, while France will increase deliveries of fertilizers, particularly potash and potassium salts, potassium sulphate, phosphate and superphosphates, cement, yarn, motorcars, electric equipment, fruits, woollen fabric, rayon silk.

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Ireland and **Western Germany** concluded a provisional trade agreement. Ireland expects to import mainly kali and other fertilizers as well as machinery in exchange for Irish cattle, dried milk, eggs and cheese.

ITALY (*see also* DENMARK, FRANCE, GREECE)

A trade agreement between **Italy** and **Poland** was signed on 15 June 1949. This agreement which became effective 1 July 1949 and which was concluded for a period of one year, will automatically be extended each year for twelve months unless six months notice to the contrary is given.

Polish snpplies will include coal (1 million tons), oats (20,000 t.), barley (10,000 t.), rye (5,000 t.), seed potatoes (5,000 t.), sugar (5,000 t.), potato starch (1,300 t.), beans (1,000 t.), malt (500 t.), sugarbeet and forage crop seed (300 t.), different seeds ($ 50,000), alcohol ($ 50,000), medicinal plants ($ 50,000), dried mushrooms ($ 50,000), eggs (45 million), guts ($ 100,000), feathers and down ($ 50,000), animal bristle ($ 50,000), sawn lumber (10,000 cu.m.), wood for cellulose (100,000 t.), chicory, casein, calfskin, chemicals, pig iron, steel bars, films, books and journals, etc.

Italy will export to Poland tobacco (2 million dollars), fodder, truck crop and flower seed ($ 100 hundred), lemons (5,000 t.) rice (1,500 t.), wines and vermouth ($ 125,000), medicinal plants ($ 50, hundred), livestock (10,000 head), chestnut extract, rice straw, cork and cork articles, crude and sublimated sulphur, hemp, silk yarn, zinc ore, mercury, industrial and pharmaceutical talc, ball-bearings, textile needles and equipment, motor coaches and cycles, spare parts for motor vehicles and tractors, machines for making edible pastes, sewing-machines, polygraphic equipment, laboratory and optical apparatus and instruments, electric equipment, paints and varnishes dyes, pharmaceutical products, chemicals, tyres and inner tubes for cars and tractors, linoleum, unbreakable glass, leather goods, metal sheeting, films, etc.

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On 4 August an additional Protocol to the trade and economic collaboration agreement of 28 April 1947 was signed by **Italy** and **Yugoslavia.** This Protocol concerns the new quota list which will be valid from 4 August 1949 to 3 August 1950.

The Yugoslav goods provisionally exported to Italy include maize (45,000 tons), beech wood for cellulose and resinous species (450,000 mst.) resinous sawn wood (300,000 m^3), sawn beech wood (50,000 m^3), sawn oak, ash, elm, walnut and other wood (50,000 m^3) and logs (10,000 m^3), hewn lumber (30,000 m^3), pitprops (20,000 m^3), poles (10,000 m^3), beech and oak strips (10,000 m^3), wood for matches (1,000 m^3), fresh-water fish (3,000 tons), sugarbeet cossettes (5,000 t.), live or dressed poultry, eggs, iron ore; and on presentation of a licence from the Ministry of Finance, 40 million lire of boar and pigskin, 300,000 mst. of fuelwood, 15,000 tons wood charcoal, fossil coal, bauxite, beef and veal (1,500 t.), beans (5,000 t.), bacon and lard (1,500 t.), vetch, plywood, dried chicory root, prunes, canned fish in oil, different sands, cement, raw opium, sepiolite, refined lead, copper.

The Italian provisional exports to Yugoslavia will consist mainly of spare parts for vehicles, chemicals, raw and processed cork (150 million

lire), citrus fruit (100 million lire), woollen and cotton fabric, forage crop and vegetable seed (60 million lire), paper bags, rubber goods, motorcycles, varnishes and enamels, pharmaceutical products, and by special permit of the Ministry of Finance, 2.2 milliard lire worth of tractors, tyres, internal combustion engines, machine-tools for working wood (650 million lire) machinery for municipal projects, 5,000 tons rice, 4,000 tons cotton yarn, 1,000 tons nitrogenous fertilizers, electric cables, ball-bearings, electric equipment, precision instruments, iron and steel goods.

NETHERLANDS (*see also* FRANCE, GREECE, SWEDEN, UNITED KINGDOM)

A trade agreement was concluded between the **Netherlands** and **Colombia** on 23 March 1949.

The Netherlands will import from Colombia coffee to the amount of 500,000 U.S. dollars per year, while Colombia will receive in exchange iron and steel goods, electro-technical and electro-medical equipment, chemicals, enamelled articles, optical instruments, etc.

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The **Netherlands** and **Finland** at Annecy drew up fresh arrangements regarding their trade agreement already in force for a period dating from 1 June 1949 to 31 May 1950. Finland is to supply among other goods, paper, sawn lumber, cardboard, pulp, steel, matches, while the Netherlands will supply edible and synthetic fats, cacao products, chemical fertilizers, salt, chemicals, aniline dyes, pharmaceutical products, rubber, coke, textiles, iron and steel goods, zinc, electro-technical tools and equipment. Each contracting party will exchange goods to the value of 183 million florins.

PORTUGAL (*see also* FRANCE)

A trade agreement between **Portugal** and **Western Germany** was agreed upon on 28 May in Frankfurt. Goods are to be exchanged for a total value of dollars 16 million. The agreement will last for a year with possible automatic renewal. Portugal is to receive machinery and iron products, electro-technical material articles made of non-ferrous metals, precision and optical instruments, hops and malt and fine leather goods. Germany is to import cork, oilseeds, sardines, sisal, wolfram ore, turpentine, and a certain quantity of wine, also pyrites, vehicles, manganese ore.

SWEDEN (*see also* FINLAND, GREECE, UNITED KINGDOM, YUGOSLAVIA)

A fresh trade agreement has been concluded between **Sweden** and the **Netherlands** to substitute the agreement of 6 December 1947. The agreement became effective on 1 March 1949 and terminates on 28 February 1950. The value of the goods exchanged amounts to 600 million crowns. Swedish exports include 300,000 tons iron ore, 100,000 standards lumber, 50,000 tons cellulose for paper, 24,000 tons cellulose for artificial fibres, 30,000 tons wood pulp for a total of 150 million crowns.

Netherlands exports will consist mainly of coke (310,000 t.) crude iron (40,000 t.), salt (90,000 t.), goods from the Netherlands colonies : coffee (1 million crowns), tobacco (15 million crowns), copra, raw rubber, palm oil. Compared with the previous agreement, smaller quotas were fixed for flower bulbs, cut flowers textiles, wireless sets, incandescent lamps.

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On 5 April a Protocol was signed for the goods to be exchanged between **Sweden** and the **U.S.S.R.** within the compass of the 1946 agreement. Sweden will supply, for a value of 45 million crowns, iron, steel, ball-bearings, oxy-acetylene welders, molybdenum, wool waste, accumulators, utensils, cattle and pigs, while the US.S.R. will supply phosphate, potash, sodium, manganese, lubricant oils, cotton waste.

UNITED KINGDOM (*see also* GREECE)

The **United Kingdom** and **Argentina** have finally succeeded in solving, in principal, the difficulties in their new trade agreement which concerned meat. Argentina guarantees a minimum delivery to Great Britain of 300,000 tons of meat in the first year, and of 400,000 tons in the following years. It is hoped that, during the 5-year period of the agreement, these deliveries will reach the pre-war figure of 500,000 tons. First year prices are fixed at £ 96 per metric ton, or £ 97 10s. per long ton, as compared with £ 76 per long ton in the former Andes agreement.

Trade exchange between the two parties aims at establishing bilateral balance and raising the exchange level to the maximum, within the framework of a general balance. With a view to bringing the mutual exchange value to £ 80,000 for the first year, Britain's exports will be considerable. Her engagements for the delivery of essential goods such as oil, coal, potash, railway equipment, iron, steel, are heavy, but, in order to reach the balance

envisaged, Argentina must also purchase considerable quantities of less essential goods, including several types of consumption goods. Argentine deliveries of 1949-50 will include maize (£ 20 million), skins and leather (£ 11.6 million), linseed oil (£ 10 million), edible oils (£ 9 million), oil-cake (£ 10 million), edible fats (£ 4.2 million).

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A trade agreement between the **United Kingdom** and **Brazil** covering a period of 15 months which will terminate on 31 March 1950, provides for an exchange of goods to the value of approximately 64 million pounds sterling: 33.3 million pounds Brazilian exports and 30.8 million pounds British exports. The latter figure does not include the value of Brazilian purchases of liquid fuel in the Sterling zone which will be maintained at about 7.5 million pounds sterling.

British exports to Brazil include, in million pounds agricultural machinery (1), textile and other machines (7.3) textiles (4.2), rail transport equipment, ships and planes, iron and steel goods, electric equipment, chemicals, pottery, glassware, coal. Brazilian products to Great Britain will comprise cotton (88,000 tons), oilcakes (25,000 t.), rawhides (25,000 t.), rice for the Commonwealth countries (15,000 t.), cacao (2,500 t.), coffee (2.4 million pounds sterling), meat (1.5 million), sugar (800,000) tobacco (400,000), softwood (20,000 stantards), hardwood (800,000 cu. feet), in 1948 lumber deliveries amounted to only 12,000 standards and 300,000 cubic feet respectively.

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On 10 February 1949 a trade agreement was signed by the **United Kingdom** and **Iceland** for the period from 1 April to 31 August 1949. Iceland was to furnish considerable quantities of frozen fish in exchange for British exports which were notto be below those of 1948.

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At the Fourth Meeting of the **Anglo-Italian** Joint Economic Committee, held in London in July, it was agreed to increase the balance of payments and the course of trade beyond the programme made earlier in the year. The Anglo-Italian Payments Agreement of 26 November 1948 expired 30 June, was renewed until 31 December 1949.

Licence-quotas further to those agreed in February 1949 will be granted for UK manufactured goods for the period 1 January 1949 to 30 June 1950, the chief increases being in the following: among agricultural commodities, tea, beef casings, ball clay, agricultural and textile machinery, insecticides, cigarettes and tobacco machinery, industrial refrigerators and refrigerating plant, milking and milk-pasteurization and conserving machinery, machinery for pasteurizing and conserving fruit juice; among other products, electronic equipment, chemicals for industrial use, prepared drugs and pharmaceutical preparations.

Quotas will be granted for previously-unlicensed commodities, including: mustard, sugar confectionery, linen thread, linen piece-goods, latex compounds. U.K. will purchase a little larger amount of Italian foodstuffs than was foreseen in the February programme, and licences will be granted to limited additional imports of Italian manufactured goods.

Credit facilities similar to those extended to United States E.R.P. imports and covering up to £ 10 million worth of goods, will extend to certain types of industrial plant, equipment and machinery imports from U.K.

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In conformity with the trade agreement between the **United Kingdom** and the **Netherlands** (see this Bulletin, 1949, No. 2, p. 128) to the value of 62.5 million pounds sterling on both sides, the United Kingdom will supply larger quantities than previously of woollen and rayon fabric, flax, waterproofs and ready-made clothing, hosiery, hats, leather gloves, chamois leathers, printing and letter-paper, pharmaceutical products, chinaware and crockery, baby carriages, watches, chocolate, jams, meat extracts, industrial and household refrigerators, gas water-heaters, accumulators, motor cycles. Quotas have also been fixed for lace, window curtains, furniture fabric, underwear, woollen carpets, varnishes and lacquers, toilet creams, cosmetics, stylograph pens, sports articles, playing cards, etc. Quotas have been established for additional goods including farm machinery, tractors and spare parts, woollen blankets, elastic tissue, ribbons, linen thread, cotton waste, wool and hair felt, cotton, rayon and linen yarn, footwear material, printing ink, photographic plates, X-ray plates, sports cartridges, copper sulphate, cork articles, parasiticides, hand and power reapers, sewing-machines, wireless sets, thermionic lamps, radar apparatus (except for household use) new or second-hand cars, tyres, bicycles and spare parts.

The Netherlands will supply dairy products (£ 11,750,000), bacon (10,000 tons), eggs (15,800 tons), fresh fruit (37,000 t.), 142,500 tons fresh vegetables (lettuce, carrots, chicory, tomatoes, onions, cucumbers, beans, cauliflowers, etc.). In addition, preserved fruit and vegetables (£ 4,812,000), fish, game and meat products (£ 3,079,000,

beer and liqueurs (£ 550,000), various food products (£ 4,393,000), seed (£ 655,000), flower bulbs (£ 2,310,000), cut flowers and plants (£ 550,000), livestock (£ 100,000).

No quotas have been fixed for Indonesia, but the United Kingdom will supply textile goods, motor cars and machines for a maximum value of 13 million pounds sterling f.o.b. in exchange for raw materials and Indonesian commodities to the value of 8 million pounds sterling.

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On 27 June 1949 a trade agreement was signed in London by the **United Kingdom** and **Spain** which will remain in force from 1 July 1949 to 30 June 1950. Spain will export to Great Britain citrus fruit, dried fruits, preserved foods, tomato sauce, canned fish, fruit juice and pulp, leaved vegetables, olive oil wines, liqueurs, iron ore, potash, raw and processed cork, superphosphates, leathers and hides, colouring earths, mercury, etc., while the United Kingdom will export coal, chemical fertilizers, farm tractors, copper sulphate, cotton, sisal, jute, rubber, wool, railroad equipment, textile machines, machinery.

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A new trade agreement has just been concluded between the **United Kingdom** and **Sweden.** Exports to Sweden are to be stepped up to 6 million pounds sterling. Deliveries of machinery and vehicles are to be increased by 3 millions pound sterling, chemical deliveries are to be increased by 1 million pounds sterling and textiles by another million pounds sterling.

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The **United Kingdom** concluded a trade agreement with the **Trizone** on 9 March last to end on 30 June 1949. During this period the United Kingdom was to furnish goods for about 30 million pounds sterling, chiefly wool and textiles, rubber, nonferrous metals, machines and manufactured goods. The German supplies were to amount to 22 million pounds sterling, and include iron scrap, potash and other raw materials.

U. S. S. R.

A contract for the supply of 1 million tons of grain from the **U.S.S.R.** to **Great Britain** came into force on 1 September 1949. Great Britain is to receive 500,000 tons of barley, 400,000 tons of maize and 100,000 tons of oats. The contract was concluded as part of the current negotiations for an Anglo-Soviet Trade Agreement.

FISHERIES

The Herring Conference

The Herring Conference held at the Hague from 29 August to 2 September 1949, was called by the FAO to examine and seek for a solution of the problems of the Herring industry in the producing countries. The meeting had been limited to representatives or observers from the countries of Europe and North America, Belgium, Canada, Denmark, Finland, France, Iceland, Holland, Norway, Sweden, United Kingdom and United States of America. The Economic Committee for Europe (ECE) and the Permanent International Council for the Exploration of the Sea (ICES) were also represented. Dr D.J. van Dijk presided over the conference and Mr A.J. Aglen (United Kingdom) and M. P.F. Louis (France) were elected 1st and 2nd Vice-Chairmen. The debates were restricted to the questions affecting herrings, those relating to sardines being deferred until another occasion. The examination of the questions dealt with production (technical information on catches, biological enquiries), herring-curing, marketing, (carriage, demand, oil and meal, international trade), prices, production costs, and future action.

The Conference expressed the wish that the above listed items should be dealt with by the FAO on practical lines by :

(1) bringing together experts in fish-curing to study the possibility of introducing on a large scale new or existing systems which might lead to a wider consumption of the herring ;

(2) study the possibility of introducing into the diet of the peoples of Asia and Africa herring products prepared to meet their tastes ;

(3) enquire into the food needs existing for products which might be supplied by the herring fishing trade ;

(4) analyse market conditions in European countries and other areas where herring is already used as a food, but where its consumption might be increased ;

(5) collect all available information from producing countries on the cost of fishing, preserving and marketing the herring ;

(6) promote the international co-ordination of the economic enquiries undertaken about herrings on a national scale ;

(7) collaborate with existing international organizations interested in the question such as the Economic Commission for Europe on matters of transport ; the Permanent International Council for the Exploration of the Sea on questions of biological research.

General Mediterranean Fisheries Council

Since its creation FAO realized the necessity of organizing, on an international scale, the scientific exploration of the sea resources. The Third Session of the FAO Conference (1947) in fact recommended 'that FAO should take action to initiate the formation of regional councils for the scientific exploration of the sea in parts of the world not now actively served by similar bodies, giving primary consideration to the following areas : Northwestern Atlantic, Southwestern Pacific and Indian Ocean, Mediterranean Sea and contiguous waters, Northeastern Pacific, Southeastern Pacific, Western South Atlantic, Eastern South Atlantic and Indian Ocean. The boundaries of these areas and the constitution of the Councils, should be left open for discussion and determination by the nations concerned '.

The utility of a Mediterranean Fisheries Council has naturally long been recognized. As early as 1910, the question was studied in a meeting held at Monaco. The first World War delayed the establishment of such a Council, and only in October 1919 was it officially set up. The first meeting took place in Madrid in November of the same year. After this and until the second World War, the Council was active. There were numerous meetings of the Plenary Assembly and of the Executive, and the contribution made to the knowledge of the Mediterranean Sea by reports of meetings, periodical bulletins and special editions, was important.

The last Plenary Assembly took place in Paris in October 1937. Since hostilities, the Council has not been in a position to resume its full meetings.

Wishing to continue a work begun so well, FAO was anxious to assist the Mediterranean countries to establish with her support a Council which would allow the research workers and scientists to resume joint study of the oceanographic and technical problems related to the development and proper utilization of the Mediterranean's aquatic resources

For this purpose FAO convened in Rome on 19 September 1949 a Conference of representatives of France (Algeria, Tunis) Greece, Italy, Lebanon, Turkey, the United Kingdom and Yugoslavia, which elected H.E. Ambassador Ugo Sola, Head of the Italian Delegation as Chairman, and M. Le Gall, Head of the French Delegation, as Vice-Chairman. The Conference which closed on 24 September 1949, unanimously accepted at its final meeting a draft agreement which will be referred to the next Annual Conference of FAO in November 1949 and then submitted to interested FAO member countries for acceptance. If ratified by five governments, it will become effective and the General Fisheries Council for the Mediterranean will be established.

Meanwhile Interim Committees on Fisheries Technology and Oceanography will undertake the preparatory work and will report on a programme at the inaugural meeting of the Council.

The Status of the forthcoming General Fisheries Council for the Mediterranean is, on the whole, similar to that of the Indo-Pacific Council organized by FAO in South East Asia, and calls for coordination of research, and recommending to member governments measures necessary to make the best possible use of the resources of the sea.

The Conference was assisted by Dr D. B. Finn, Director of the FAO Fisheries Division in Washington and Dr J. L. Kask, Chief of the Biological Branch and by Mr M.J. Girard, FAO Regional Fisheries Officer in Europe who served as Secretary of the meeting and will continue to serve as Secretary of the new Fisheries Council.

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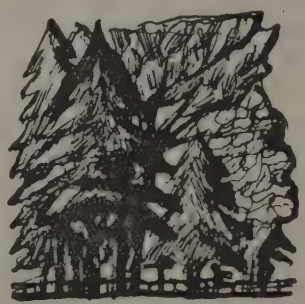
The Coordination Board for the fishery industry in Greece at the end of 1948 determined the general conditions governing a new system of loans intended for the reconstruction and overhauling of the fishing fleet. These loans will be granted to deep-sea, inshore and lake fishermen in accordance with a certain order of priority.

(Information sociale, 1 June 1949).

F O R E S T R Y



Reafforestation in France

The report on the activity of the French National Forest Fund in 1948 and the statement on the situation up to 30 June 1949 show, that in 1948, approximately 130,000 hectares were re-afforested in addition to forest protection and equipment

work. Loans granted to prevent splitting up of woods and excessive felling saved a further 2,000 ha. of forest.

The Parliamentary Audit Committee of the National Forest Fund at a meeting held on 7 July, requested that the draft budget for 1950 as well as the expenditure estimates for that period be presented to it by 1 October. The Committee approved a series of important projects submitted : (1) establishment of a pine-seed drier with refrigerator equipment in the Joux Forest, designed to supply the nurseries of the entire territory ; (2) Loan of 500,000,000 francs granted to the Var Department for carrying out fire protection operation in the Maures and Esterel forests ; (3) Loans of 100,000,000 francs for the Gironde Department and 100,000,000 fr. for the Landes Department to be used for fire protection in the Gascony Landes forests.

World Forestry Congress at Helsinki

The IIIrd World Forestry Congress met at Helsinki from 11 to 19 July 1949, as proposed in a resolution passed by the 3rd Session of the Conference of the Food and Agriculture Organization of the United Nations.

The Congress was attended by experts from 30 countries, representing 90% of the forests of the world. The following international organizations were also represented : the Economic Commission of the UNO, the Food and Agriculture Organization of the UN, the International Union of Institutes for Forestry Research Work, and the Scandinavian Forestry Union.

The Congress was opened by Mr K.A. Fagerholm, President of the Council of Finland, and by His Exc. J.K. Paasikivi, President of the Republic of Finland, who welcomed the Delegates.

Messages of goodwill from the Secretary General of the UNO and the Director General of FAO were read respectively by Mr D. Roy Cameron and Mr Marcel Leloup.

After the election of the Chairman, Prof. Saari (Finland), and of the Co-Chairman Mr C.M. Granger (United States) and Mr T. Petrov (U.S.S.R.), the Congress accepted the provisional Agenda drafted by the Organizing Committee and decided to distribute the leading questions to be discussed among the 5 sections as follows :

(1) Sylviculture
(2) Forestry inventory
(3) Forest economy
(4) Forest utilization
(5) Wood industries.

At its last plenary meeting the Congress unanimously approved a Report in which the conclusions reached by the several Sections were collected. Besides the recommendations of a technical description, this Report contains a general recommendation dealing with the need for each country to adopt a scientific forest policy entailing the adoption of legislative measures, scientific reseach departments, forestry instruction, and the training of forest staff and workers.. The recommendation also calls on the FAO to draw up a statement of the principles of forest economy and sylviculture, to be submitted to the study of the member States, and a k; the annual Conference of the FAO to examine any other measures that the Governments may deem advisable for giving effect to the said principles.

During the Congress the delegates took part in many receptions organized in their honor by the Finnish authorities, the several Legations, and by private citizens.

In closing this note, reference should be made to the excellent organization of the Congress, for which Prof. Saari, President of the Organizing Committee and Mr E. Leloup, Secretary General of the Congress, were responsible. We would also mention that most of the delegates to the Congress took part in excursions of a very varied character which had been organized from July 6 to 10 in several parts of Finland.

World Conference on Mechanical Wood Technology

Complete and unanimous agreement was reached in Geneva on an international standardization of numerous timber testing methods. These agreed methods will form the basis for an international convention on mechanical wood testing.

The twenty countries participating in the first World Conference on Mechanical Wood Technology, achieved this agreement after numerous earlier attempts over the last two decades had failed. The conference, held here during the past week, was convened by the Food and Agriculture Organization's Forestry and Forest Products Division.

Methods of physical and mechanical testing of other timber products, such as plywood and fibre wallboards, were also reviewed by the Conference and the bases were laid for eventual international agreements on this subject.

While recognizing the great difficulties encountered in attempts to standardize commercial grades and sizes of sawn timber, the Conference believed that substantial progress could be made toward a more economical and efficient engineering use of timber by establishing a limited number of universal structural grades.

The Conference instructed FAO's secretariat to compile and reconcile wood nomenclatures on a world-wide basis.

Experts on wood technology from the following countries attended the Conference here from 29

August through 3 September : Australia, Austria, Argentina, Belgium, Canada, Czechoslovakia, Dominican Republic, Finland, France, Luxembourg, Italy, Norway, Netherlands, Poland, Portugal, Sweden, Switzerland, Thailand, the United Kingdom and the United States of America. Mr Jean Campredon (France) was Chairman of the Conference.

PLANT DISEASES AND INSECT PESTS

New Order on the control of sugarbeet and hop pests

The Decree of the Czechoslovak Government of 7 July 1949, No. 158 of the Statute Book of 1949, imposes on sugarbeet and sugarbeet seed growers the duty of exterminating at their own expense insects attacking these crop son land tilled by them, principally by collecting and destroying the insects. Collecting can also be supplemented by letting poultry range in the sugarbeet fields. If sugarbeet is attacked by weevil, protective catch ditches must be dug around the infested fields and the insects collected in the ditches destroyed. If this is not sufficient, spraying or dusting of the plants with chemicals must be used to destroy the insects.

In hop-growing regions the hop-growers must protect the plants at their own expense by all available means against hop-fleas, hop-flies, and perenosporas, and destroy these insects at all stages of their development. Hop-growers must report without delay the appearance of these insects, or their suspected appearance, to the Local National Committee which must do its own checking as a part of its official duties. The Local National Committee must then report immediately, by wire or by telephone, the appearance of the insects to the District National Committee, and the appearance of sugarbeet pests also to the sugar factory receiving raw material from the locality. A similar duty is imposed on Unified Agricultural Cooperatives and on people's agronomists. If the insects appear in dangerous quantities, the growers must carry out the operations for their extermination by joint effort financed by them, especially through the Unified Agricultural Cooperatives. If the growers do not fulfil their duties, the respective Local National Committee will take the necessary steps at their expense.

N° 8 IAI Bulletin, Zemědělské noviny, 26, VII, 1949.

RURAL WELFARE

Meeting of agricultural extension work

A European meeting of specialists on extension or advisory work in agriculture was convened by FAO in Brussels and the Hague From 1 to 13 August 1949. The experts from Austria, Belgium, Czechoslovakia, Denmark, Finland, France, Greece, Ireland, Italy, Luxembourg, Netherlands, Switzerland, United Kingdom, and Yugoslavia together with the representatives of the Food and Agriculture Groups of the Bizone and French Occupation Zone, the Holy See, International Labour Organization, International Federation of Agricultural Producers (IFAP), Organization for European Economic Cooperation, and the U.S.A. met in Brussels and after a study trip through the agricultural area of Northern Belgium they sat down to work in The Hague on 3 August in order to discuss problems and exchange information and experience in respect to organization and methods of agricultural extension. The keynote of the discussions was set by the principle which the delegates have written in their final recommendations : ' National economic and social progress in any country depends fundamentally on a continuous improvement in the efficiency of agricultural production, and in the level of living of the farm people. It should be the goal of every European country to bring its extension or advisory services to the highest level of efficiency as rapidly as possible ,.

In Europe, these services have originated in several different ways, but the major part through governments' initiative. They have the responsibility to bring the results of agricultural research to the farmer and at the same time to make clear to the research workers the problems faced by the farmers. The advisory services should also keep farmers informed on economic and marketing subjects as well as on the techniques of production itself.

The delegates discussed thoroughly all the aspects of advisory work : original development, functions, present organization, relationship to research and educational institutions, cooperation with farmers' associations, methods and media of advisory work, training of personnel, equipment and financing.

The final meeting adopted recommendations which will be sent by FAO to the European member governments and which call for organization and administration of extension services in such a way as to provide instruction on problems of domestic science and rural living for the farm workers, training of farm boys and girls for their future responsibilities and of all farm people for the more specialized and technical work they are required to perform in modern agriculture. Closer relations should be maintained between the workers and institutions concerned with this work. Greater attention is to be given to advisory work among farm women in household sanitation, nutrition and the care of children and other phases of home making activities.

The extension worker must 'have the ability to speak and mix freely with every class of people, possess their mind, be their teacher, guide and colleague, and above all their friend, a man in whom they have complete confidence'.

Most generous financial support should be given by the governments to the extension services in order that adequate service in agriculture and home-making may be brought to the farm people of every nation.

The delegates in attendance agreed that the meeting had been most successful and before parting expressed their thanks to the host country and FAO for its organization.

FAO ACTIVITIES

FAO part in technical assistance program

We give below a short account of the report containing 57 proposals for expanded activities in technical assistance for economic development which has been submitted by N.E. Dodd, Director-General of FAO to FAO member governments:

Background of program

Hungry people could get more food quickly if the farmers in under-developed countries had access through extension services and by other means to production aids known to modern science.

Likewise people could be better housed if modern techniques in forestry and forest products were put to work in under-developed regions.

Great unexplored stretches of the sea await the application of modern fisheries practices to unlock vast new food resources.

With the knowledge of modern nutrition widely extended, existing food supplies could improve the diets of peoples in many regions.

Rural industries based on modern technology could be established quickly in under-developed areas to employ surplus labor, increase the buying power of workers, and provide much needed manufactured and processed goods.

In many cases improvement could increase production from 10 to 100 per cent. in a relatively short time, and so provide more and better food and higher standards of living for millions of hungry people.

It is estimated that on a world scale livestock production could be increased by at least 25 per cent in ten years if modern breeding methods were generally applied. Poultry and poultry products could be increased by more than 100 per cent. with little increase in feed requirements.

In 5 to 10 years it would be possible to eradicate the rinderpest, the major livestock disease in Africa, Asia, and the Far East, where it accounts annually for the loss of at least 2 million head of cattle sorely needed for food and draft power.

A judicious combination of modern forest industries would make it possible to use as much as 80 to 90 per cent. of the annual cut, compared to the present average yield from forest operation of 20 to 30 per cent. In this way a substantial increase in production could be achieved without the need to raise annual depletion. This would both increase the amounts of timber, pulp, and other products available for consumption, and make it possible to add new products, such as wallboard, plastics, protein feed, and liquid fuels.

Summary of projects

Agriculture

Farmers everywhere are concerned with the same elements of production — soil and water, crop plants and animals, pastures and feedstuffs, insects and diseases, tools and materials, and some source of power, whether muscle or machine.

The elements are fundamentally the same, yet they vary enormously in character over the world.

Great advances in production can be made by comparatively elementary improvements — better hand tools, better-bred seed, the use of crop rotation, a little fertilizer, some insecticides and a hand duster, means of reducing the worst animal disease ravages, perhaps a simple pump for irrigation. And most important of all, sound advice and assistance from an extension worker or someone near at hand who knows about the praeti-

cal application of modern developments in agricultural science.

In many cases such improvements as these could increase production 10 or 20 or 50 per cent. in a relatively short time. But some projects for irrigation, soil conservation, reforestation and land settlement, will necessarily go along side by side with the elementary improvements.

Forestry and Forest Products

About 30 per cent of the land of the world is under forests. Properly managed, forests can provide a permanent and steady flow of fuel, building material, pitprops, railroad ties, raw material for paper, and chemically derived wood products which will total at least twice the present world output. Forests can guard against erosion, protect the headwaters of rivers to minimize floods and the silting of channels and croplands, and regularize the flow of water needed for agriculture and industry.

Neither the productive nor the protective values of forests are being fully utilized in most countries. In fact, much of the current use is needlessly damaging or destroying these values.

To protect, restore, and use forest assets must be part of any sound program of economic development. The surest way to realize that a forestry program will pay is to appraise the true loss in the permanent wealth of a nation if such a program is not put into effect.

An enduring program involves, first of all, appraising the resource and planning its orderly development. The basic methods of conservation for permanent use must be determined and put into effect. The newer technologies of using wood must be applied according to the conditions in each country. Government services must be built up to provide leadership and direction. People must be trained to do technical work. And the conservation and development projects must be so conceived and carried out that they will complement one another and make a balanced whole.

Fisheries

There is little definite information on which to base an estimate of potential increases in fish production, but they could undoubtedly be substantial without harm to resources. There is also room for very great improvements in the quality of fisheries products. But to achieve these increases and improvements on an extensive scale is peculiarly difficult. The industry is made up mainly of many individual units. Most fishermen are poor. Government fisheries services except in a few cases, are rudimentary or non-existent. The use of age-old techniques is the rule rather than the exception. Modernization is confined to a few countries. The industry bristles with unsolved problems and unanswered questions in production and marketing, technology and economics.

Before FAO was set up, no organized attempt had been made to deal with these problems on a world scale. The organization has therefore had to begin at the beginning. The most urgent needs are for the development of forward looking policies by governments and the necessity for well serviced administrations for executing them.

Nutrition and Food Management

In a broad program to develop the human and material resources of under-developed countries nutrition is of central importance. Objectives for food production in a given country must be founded on knowledge of the existing consumption levels, dietary habits, and nutritional requirements of the country. Practical measures to improve nutrition such as supplementary feeding of school children need to be initiated and developed; people need to be taught better dietary habits and better methods of food preparation; the use of foods made available by advances in food technology should be encouraged. All this involves in particular the creation of effective nutrition advisory services in the under-developed countries, the training of expert personnel, and the encouragement of research on specific nutritional problems of national or regional importance, including especially studies of the nutritive value of local foods.

Rural Institutions and Services

Much progress in production can be made through the widespread adoption of comparatively simple improvements.

The problem is to use and develop rural institutions and provide service which make the knowledge and experience of the technician or administrator available at the farm or village level.

The problem of increasing production and improving distribution of food and other basic products demands combined action in many fields. Projects now proposed deal with a few of the most important extension services, rural industries, cooperatives, and community demonstration centres.

In all of this work, not only must such aspects of human welfare as nutrition and health be stressed — which would often involve cooperation with other international agencies — but, even more important, the habits and customs of people must be taken into account. If new methods of production are to be learned, they need to be fitted into — or grow out of — customary patterns of life, which often change only slowly.

Economic and Statistical Services

In more advanced countries collection and analysis of important facts relating to food and agriculture are such familiar activities that they often

are taken for granted. This does not hold for the less developed countries where, in many cases, so fundamental a basing point as an agricultural census may be either poorly developed or non-existent. Under these circumstances the basic facts are lacking for establishing practicable goals for agricultural development.

Thus, one of the fundamental needs in programs for developing agriculture, forestry, fisheries, or rural industries is creation or improvement of government services for taking censuses, collecting and issuing current statistics, and analysing the facts obtained.

In addition to providing a general basis for development, skilled work in statistics and economic analysis often must be brought to bear on particular problems or sets of problems, such as strengthening credit facilities, improving marketing conditions, fostering cooperatives and small industries, or appraising the economic feasibility of particular development projects. In particular, development projects that call for investment require analyses to show whether the additional production that can be obtained will justify costs, whether markets can be found for the additional product, and how the proposed development activity fits into the general economic position of the country.

European Committee on Agricultural Technology

The Director General of the FAO of the United Nations convened a meeting at Paris on June 27-28 1949, at which the setting up of a European Committee on Agricultural Technology was considered.

The meeting held three sessions in which participated :

delegates from Belgium, Denmark, Finland, France, Greece, Italy, Ireland, Netherlands, Norway, Switzerland, Turkey, United Kingdom, FAO and observers from ECE, UNESCO, OEEC, ECA, ILO.

Mr N. E. Dodd, Director General of FAO, opened the meeting. Sir Ralph Enfield (United Kingdom) was unanimously elected as Chairman.

The meeting, unanimously considering that the setting up of the proposed European Committee on Agricultural Technology was highly desirable, recommended its establishment to the Director General.

The Meeting expressed the desire that the Committee serve as the centre for most international technical activities for the benefit of European agriculture and coordinate the work carried out by official, semi-official, and non-governmental, international organizations in order to bring about unification and simplification wherever possible, particularly in view of the difficulties the Governments are experiencing in sending delegates to the numerous international meetings now being held.

The Meeting expressed a desire that the Committee work in close collaboration with official, semi-official and non-governmental international organizations interested in European technical agricultural problems. It wishes, to this end, to take advantage of the existing working relations between these organizations and FAO, and suggests, in view of the need for coordination of the various activities related to agricultural technology, that the programs of such organizations be regularly considered by the Committee.

The Committee might work in the following way :

(*a*) Select a relatively small list of problems with which it will deal at the outset.

(*b*) Consider whether the information available on each problem is sufficient to permit immediate decisions leading to action or whether further information is required, in which case it will be assembled by :

a working party of specialists delegated by the Governments at the Governments' expense ; FAO which might convene a European meeting of specialists, sent by Governments of all interested countries, utilizing the results of international congresses and meetings ; also in certain cases the staff of FAO might assemble or assist in assembling information. In still other cases, national and international institutions having qualified staff with time available to work on specific problems might prepare reports.

Having sufficient information before it, the Committee might recommend a desirable line, or lines of action ; strengthening government services ; implementing technical field programs through existing services ; strengthening national research programs coordinating research work in two or more countries ; exchanging technical personnel, facilitating training of needed new personnel ; and

Agree on the extent to which help is needed by a country or group of countries and secure help from difierent sources :

Self help (a specialist might be loaned from one country direct to another). The exchange or loan of personnel would be made at the expense of the requesting country. Material such as films may be exchanged between countries.

Outside help, supplied through FAO from its regular services, or in the case of certain countries from the residue of the UNRRA-transfer fund in the form of specialists to advise on specific problems, experimental seeds, etc., advisory participation in the development of a coordinated program of research, on a particular problem, between two or more countries.

Other sources, for example, ECA funds available to OEEC countries.

The Meeting considered that in so far as is feasible meetings of the Committee, as well as those of working parties, and other technical meetings should be convened in various countries in order to establish a closer relationship between technicians.

It was proposed that the first meeting of the Committee be convened on 26 September 1949, in Rome, to study the priority order of questions on the proposed work program, *i. e.*:

(1) Improving extension or advisory services.

(2) Improvement of food supplies for livestock.

(3) Control of soil erosion.

(4) Control of infestation in stored products.

(5) Control of locusts.

(6) Control of animal diseases, particularly in Eastern Europe.

(7) Preservation of foods by quick and cold storage.

(8) Standardizing methods of milk and butterfat recording.

(9) Procedures and organizational problems for artificial insemination of livestock.

(10) Improvement of grasslands.

(11) Improved plant production through breeding, *e. g.* hybrid maize.

(12) Improvement in dairy production and processing.

(13) New developments in the control of plant pests.

A report on the results of international meetings in Europe on agricultural technical problems and one on international organizations dealing with technical agricultural problems in Europe including summary outlines of the main activities of these organizations were also to be examinated.

* * *

The European Committee on Agricultural Technology closed its first five-day session at the European Regional Office of FAO in Rome on 30 September 1949.

Representatives of Belgium, Denmark, Finland, France, Greece, Ireland, Italy, the Netherlands, Norway, Switzerland, the United Kingdom and Yugoslavia together with observers from Bulgaria, Spain, Holy See, International Labour Office, and the Organization for European Economic Cooperration were present and met under the chairmanship of Sir Ralph Enfield, United Kingdom.

They discussed the possibility of coordinating the activities in agriculture between different nations. Various resolutions were passed concerning methods whereby this coordination can be effected. These include the convening of meetings of experts in specialized fields such as Grassland Research, Soil Conservation, Livestock Feeding, Extension and Advisory Services and Plant Protection.

Progress was made towards achieving a means of avoiding duplication of effort, which undoubtedly exists at the present time between various scientific and technical organizations covering different fields of agricultural technology.

Centenary of David Lubin commemorated

'Peace through Justice to the Farmer' is the motto of the marble tablet unveiled at the European Regional Office of FAO in Rome on 25 July 1949 by the Italian President Luigi Einaudi at the commemoration of the centennial of David

Lubin, pioneer of international cooperation in agriculture and instigator of the foundation of the International Institute of Agriculture.

Addressing a distinguished gathering composed of the Italian President, the Prime Minister, and other high officials, the Chairman of the ceremony, Count Sforza, Italy's Foreign Minister, said that there was in the long run no more genuine realism than that of the so often derided Utopians of genius and pointed out how Lubin helped to lay the foundations of new roads along which humanity is marching now.

Mr J.C. Dunn, the U.S. Ambassador in Rome, emphasized the pride his country felt for this distinguished exponent of social justice and democracy. Mr A.H. Boerma, European representative

for FAO, associated himself on behalf of the Organization with the views expressed by the speakers and said that to his mind the best expression of gratitude would be to establish an international centre for agricultural research named ' David Lubin '. Mrs Rossetti-Agresti, David Lubin's faithful collaborator for many years, gave a personal touch to the proceedings in relating many facts of David Lubin's work and life.

The daughters of David Lubin, Mrs Lubin-Saqui and Mrs Lubin-Silenzi, expressed their thanks for the impressive ceremony, quoting their father's words : ' the nations are beginning to understand that " righteousness exalteth a Nation " and that pure egotism, whether of an individual or of a nation works toward ultimate ruin. They will begin to learn that disaster for one country means disaster for other countries ; that prosperity for one means prosperity for many. It has taken the world centuries to learn this ; it may take centuries more to learn it properly ; but it is learning and presently it will know '.

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The Government of Korea has applied for FAO membership ; the application will be dealt with by the Fifth Session of the FAO Conference to be held in Washington, 21 November 1949

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The National FAO Committee of Finland has published the first two mimeographed numbers of its bulletin under the title ' FAO in Tiedoituksia '. It gives information on FAO's work and is scheduled to have 10 issues a year.

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The Holy See has nominated Monsignor L. G. Ligutti, Secretary General of the National Catholic Rural Life Conference (Iowa, U. S. A.) to act as its representative in the capacity of Observer to FAO.

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Mr Gordon P. Boals, Chief of the Cereals Section of FAO's Distribution Division has been loaned by FAO to serve as temporary Secretary-General of the International Wheat Council in London, for an initial period of three months pending the appointment of a permanent officer for that post.

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Sir Herbert Broadley, Deputy Director-General of FAO, at the Wheat Council meeting held in Washington on 6 July 1949, pledged the support of FAO to the newly formed Council and in paying tribute to the great importance which FAO attaches to the International Wheat Agreement as the most important development yet achieved in the programme of orderly world marketing of basic agricultural commodities, said, ' We in FAO wish to cooperate closely with the new Wheat Council in all its activities and shall be happy to give it any help we can in supplying personnel, information, statistics. The more closely FAO and the Wheat Council can be associated and work together, the greater will be the benefit to both bodies — and to the producers and consumers of wheat throughout the world '.

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Two staff specialists have been sent to Ecuador to assist that country in recovering from the heavy damage done to its agriculture by the recent disastrous earthquake. Dispatch of two experts results from acceptance by the Government of Ecuador of FAO's offer to render all possible assistance to its member country.

Donald W. Gilfillan, one of the two specialists, is an expert in irrigation, with broad experience in China both under UNRRA and FAO. The second specialist, A. G. Sandoval, is an agronomist with previous experience in Ecuador. From 1942 to 1945 Mr Sandoval was director of an agricultural mission sent to Ecuador by the United States Office of Inter-American Affairs.

Officials of the Ecuadorean government have indicated a particular need for technical help in organizing the repair of damaged irrigation facilities and in restoring fruit cultivation areas. The two FAO staff members will work with Ecuadorean officials to determine how FAO can best assist in this work.

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The French Government appealed to FAO at the September meeting of the FAO European Commission on Forestry and Forest Products to assist in alleviating the effects of the recent disastrous forest fires which devastated an area of 120,000 ha. in the Landes. As a result of the catastrophe, exceptional supplies of timber from damaged trees have become available amounting to approx. 5 million cu.m. The delegates to the Commission, of Belgium, Italy and the United Kingdom expressed their Governments' desire to co-operate with France.

FAO Bulletin reports indications that postwar peak in farm product prices has generally been passed

Wholesale prices of farm, forestry, and fishery products declined in relation to the general wholesale price level around the world during 1948/49, FAO reports in the July issue of its Monthly Bulletin of Statistics. The decline was particularly noticeable in the last months of 1948 and the early months of 1949, with many indications that the postwar peak in farm product prices has generally been passed.

Major influences affecting the decline were better farm production and a slackening of inflationary pressures.

Declines were greatest in such countries as Hungary, Finland, and France, where inflation held full sway in the earlier postwar years, but has since abated.

There were a few exceptions to the general decline. These were in countries where prices had previously been held down by government controls or where the production of meat and livestock products was of great importance. In Australia, for example, higher meat prices maintained general agricultural prices at a high level.

Despite the general declines, however, wholesale prices of farm products compared to wholesale prices of all products in late 1948 or in 1949 average about the same as prewar, with about as many countries above the prewar average as below. In cases where countries are paying farmers direct subsidies which are not included in wholesale prices, prices received by farmers are relatively higher than prices of farm products at wholesale.

Among noteworthy economic changes in 1949, the FAO Statistics Bulletin reports, is a slackening of industrial expansion in a number of industrialized countries. Although Germany, Japan, and to a lesser extemt Norway and France continued to show rapid expansion of industrial output, Canada, Denmark, and Sweden reported output in early 1949 little if any higher than the average of 1948. In Italy, Chile, and the United States of America, output was definitely lower. The United States, with industrial output in May about 9 per cent below the 1948 average shows the sharpest decline. The number of unemployed, though low, increased in comparison with a year earlier, not only in the United States but in a number of European countries.

Despite the declining economic activity in the United States, activity in the rest of the world as a whole may continue to expand in 1949. The extent to which the current decline in the United States will affect economic conditions and the demand for farm products in other countries will depend in good part upon how far their economies are or can be insulated from the developments in dollar areas, and upon how greatly the decline in U.S. buying power reduces U.S. imports. Except for effects of price reductions on producers of commodities for commercial export to the dollar area, the decline on the whole may have relatively little effect during 1949 upon the prosperity of farmers in other countries. Internal demand for farm products for domestic consumption seems likely to continue high in most countries. If the downward trend in U.S. activity should continue in 1950, however, it might have more serious repercussions on the economies of other countries, and in turn upon the demand for farm products in those countries.

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The numbers 5-9, Vol. II of the 'Monthly Bulletin of Food and Agricultural Statistics' contain valuable data on production, trade and prices. N° 8 gives news on crops, information on the dissolution of IEFC and on trade agreements, in addition to current statistical data on the production of groundnuts, potatoes, dried beans, milk, and on trade in wheat and wheat flour, rice, groundnuts, potatoes, condensed and powdered milk, prices of wheat, rice potatoes together with wholesale indices.

N° 9 brings data on production of wheat, rye, rice, sugar, dairy products, meat, butter, the respective trade statistics, and information on nitrogenous fertilizers.

Single copies are available at 25 U.S. cents at FAO sale agencies throughout the world.

FAO report on livestock and meat

A new report on the world meat and livestock situation has been issued by FAO as number 12 of the FAO Commodity Bulletin series. (Price 50 U. S. cents).

New figures are compared to those of last year and pre-war years to show that, the world over, meat production in 1948 was slightly less than in 1947 and considerably less than the 1934-38 annual average. Europe's production was still at only 62 per cent. of the pre-war level.

The volume of shipments from the eight major meat exporters of the world Argentina, New Zealand, Australia, Canada, Uruguay, the United States,

Denmark, and Brazil — fell last year to 16 per cent below the 1947 figure and to 19 per cent below the pre-war average.

A large proportion of the meat trade is conducted through bilateral trade contracts at negotiated prices ; a world price for meat does not exist.

The world output of meat is expected to increase generally during the next two or three years, with major increases occurring in Europe. If European countries reach expected levels of output, their production of meat will be near the pre-war level by 1952-53.

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' Food Balance Sheets ' published by FAO in April 1949 give information on the national supply of food in 41 countries. They show the quantities of all foodstuffs produced in a country, amounts of food entering the trade and used as animal feed, seed and for manufacture. Hence the national supply available for human consumption and its nutrient content can be assessed. The balance sheet stops short at the total food supply available at the retail level. Dietary surveys would be needed to obtain further information on how this supply is distributed among different groups of the population.

Despite all steps taken to consult the governments so that the figures could be verified, the Food Balance Sheets, as they are published, represent mainly the work of the FAO secretariat, and the governments are not committed to the figures they contain.

Among the European countries on which the 312-page English-French-Spanish publication gives information are : Belgium Denmark, Finland, France, Germany (Bizone, French Zone and Saar, Soviet Zone,), Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Sweden, Switzerland, United Kingdom, Yugoslavia.

' World Food Appraisal as of April 1949 ' was published by FAO in May 1949. The document was used as a working paper by the Sixth Session of the Council of FAO in Paris in June 1949.

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' UNASYLVA ', bulletin of the FAO Division of Forestry and Forest Products has published N^{os} 2,3, 4 and 5, Vol. III in English. By way of example we should like to mention the artic'e ' Meeting Asia's Timber Needs ' (N^{o} 4 Vol III) by S. Kamesam. The author argues that timber has been wasted on a ' colossal ' scale because of wrong engineering design and the use of untreated wood. If this problem were tackled properly, the author maintains, ' there need be no apprehension over a timber famine or over inadequate supplies in the coming years for even large-scale industrial development. ' The sleepers for example are made according to a design fixed nearly a hundred years ago ; their production requires large sized trees and there is wastage of nearly 50% of the log in conversion. The possibility of saving at least 30% to 40% of timber in railway sleepers, and of a 50% to 10% reduction of waste during the conversion of logs should be fully explored. The article also deals with the possibilities of other means of timber-saving in construction, heating, etc.

The 4th issue of UNASYLVA is devoted to the publication of the papers presented at the Mysore Conference. Other articles deal with recent conferences on forestry and related subjects, including the Conference on World Pulp Problems at Montreal in May, the World Forestry Congress at Helsinki in July, the Geneva session of the ECE Timber Committee in March, and the Seventh Pacific Science Congress in New Zealand in February.

There is also a commodity report on softwood lumber, and a regular feature on ' News of the World '.

In the French edition of ' UNASYLVA ', only N^{o} 1, has come out. The other numbers are in the press.

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Under the title ' Report of the Preparatory Conference on World Pulp Problems ' the documents on this important meeting held in Montreal, Canada 25 April-4 May 1949 have been made acce sible to those interested. This 58 page publication also contains the texts of speeches made by Mr Norris E. Dodd, Director General of FAO and Mr M.Leloup, Director, Division of Forestry and Forest Products of FAO, as well as a message from Mr Jaime Torres-Bodet, Director General of UNESCO.

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. A report of the *Latin-American Conference on Forestry and Forest Products* which took place in *Teresopolis, Brazil* in April 1949 has just been published by FAO. The report is divided into two chapters, the first dealing with *Utilization of Forest Resources* and the second with *Protection and Development of Forest Resources.* There are four appendices, a Memorandum regarding the Conference, two dealing with the procedure of the conference and N^{o} 4 is a Reference List of Resolutions adopted by the Conference.

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The Report of the Forestry and Timber Utilization Conference for Asia and the Pacific which took place in *Mysore, India,* in March of this year has just been published by FAO. There is a preamble, a chapter dealing with Problems of the Region, one giving the Resolutions adopted by the Conference, one appendix dealing with the Agenda for the Conference and one giving the List of Participants.

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The 100-page publication 'Report of the 4th Session of the Conference' (English Edition) issued by FAO in March 1949 reprints the final documents of this meeting held in Washington, 15-29 November 1948.

The French edition has just been published and is obtainable at the price of one dollar at the Regional Office of FAO, Villa Borghese, Rome.

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In 1949, N^{os} 1-4 of the FAO Fisheries Bulletin have been published in English and French. It is being issued bimonthly and its principal function is to provide a link between the FAO Yearbook of Fisheries Statistics, 1947 and the next edition of the Yearbook; its second function is to present information on current fisheries mainly in the form of statistics.

Beside the data on current landings, the Bulletin carried information on computing human consumption of fish (N^{o} 2) and general aspects of the world's tuna fisheries (N^{o} 4). Technological publications quoted in these two numbers will be also of interest to the reader.

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'Salted Cod and Related Species' is the title of N^{o} 1 of the new FAO fisheries study series (Price 2 U.S. dollars). This 196-page publication prepared by G.M. Gerhardsen and L.P.D. Gertenbach presents the information on salted cod and related species which FAO has been able to collect between the spring of 1947 and 1949. A great part of the information is in the form of statistics and has never been compiled and collated on an international basis. Information is given on the volume of world trade, operational features of the salted fish industry, government action on salted fish trade from 1920-39, prices, development since the outbreak of World War II; 65 statistical tables, nomenclature list, list of literature are in appendix.

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FAO is shortly publishing a report on the Shantan Bailie School, Kansu Province, China. This is a significant development in training for rural leadership, education in the promotion and management of co-operatives, and the development of agricultural skills and the techniques required for small-scale industries.

The study has been made in the belief that the Shantan experiment will provide suggestions and stimulus in the establishment and development of similar efforts in other countries.

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The FAO Bulletin edited by the Information Service in Washington Vol. IV N^{o} 4 deals in particular with the Wheat Agreement and gives also Notes on Recent FAO Publications.

FILM NEWS FROM MEMBER COUNTRIES

FAO is planning to show the world's latest and best 16 mm. moving pictures on all subjects within FAO's field of activity on the occasion of its Fifth Annual Conference which will start on November 21 of this year in Washington D.C., United States of America.

FAO is therefore most interested to receive any information concerning 16 mm. films covering this field which are either still in production or which are mentioned in catalogues.

A selection of 16 mm. films will be made and shown at the Conference and a list of agricultural, forestry, fisheries, nutrition films will be incorporated in a world agricultural film catalogue which will be issued for the conference.

Furthermore a small technical film library is to be started at headquarters and donations of 16 mm films will be appreciated. Free circulation to interested agricultural specialists amongst our 58 member countries can be ensured.

Some more Swiss films

An instructional film on industrial crops 'L'industrie et la bataille des camps' was recorded in 1944. It is a talking film in German and French taking about fifteen minutes to show. There is also a French version with the captions in English. This reel is lent to interested parties by the Swiss Association for industrial crop enterprises, at Wädenswil.

The Swiss Union of supply cooperatives, Thiersteinerallee 14, Basel, has a film entitled 'Viribus Unitis' and deals with mountain agriculture. There is a German and French version in the normal and abridged formats. This film, very original, is 2,400 metres long, and takes 1 hour 20 minutes to show. It is available to those interested.

The abridged film Centre, Erlachstrasse 21, Berne, has had a series of small agricultural instructional films, silent, recorded:

	Title	*Length*
1.	*L'elevage suisse de la race brune* (Swiss breeding of the Brown cattle breed) (Captions in French and German)	575 m.
2.	*La race du Simmental* (The Simmental breed) (German and French)	433 m
3.	*La race d'Hérens* (The Herens breed) (French)	270 m.

	Title	Length
4.	*Auf einer Geflugelfarm* (On a poultry farm) (German)	76 m.
5.	*Das Schweizerschaf als Fleischlieferant* (The Swiss sheep as a source of meat) (German)	58 m.
6.	*Le Doryphore* (The Colorado beetle) (French and German)	92 m.
7.	*Fécondation des arbres fruitiers* (Fertilization of fruit trees) (French and German)	100 m.
8.	*Schweizer Obst, sein Weg zum Konsumanten* (Swiss fruit, its way to consumption) (German)	350 m.

The Agriculture Division of the Federal Department of Public Economy, Laupenstrasse 25, Berne, can also lend two films :

1. 'L'extension des cultures' (Crop extension) 35 mm., silent, about 2,000 metres long, captions in French and German.

2. 'Notre blé vaincra la faim' (Our wheat will conquer hunger) — Synchronized sound, 642 metres long, French and German versions in the normal and abridged formats.

Member nations desiring to borrow these films are requested to apply to the Swiss National FAO Committee which will forward them in the shortest possible time.

Turkish films on agriculture

		Reels
1.	*Zirai Kombinatar Calesmalare* (Work of the agricultural 'Combinats')	2
2.	*Karacabey Harasi* (Karacabey Stud-farm)	1
3.	*Eukalyptüs* (Eucalyptus)	2
4.	*Dursunbey Orman Islemesi* (Utilization of the Dursunbey forests)	2
5.	*Bursa Ziraat Okulu* (Brusa School of Practical Agriculture)	1

We publish the above lists of films which are available in Switzerland and Turkey. We do this on a purely informative basis as we think our readers are interested to know what films are available and in which countries. This, however, does not necessarily mean that FAO is sponsoring these films or that it is in a position to make prints available. In most cases the FAO National Committees are able to give further information if this is desired.

List of films available at the European Regional Office of FAO in Rome

Films on FAO.

I — *The World is Rich* — Production 1947 by Paul Rotha for Central Office of Information, United Kingdom, Governments of 8 countries cooperating. Endorsed by UN Film Board. Successor to *World of plenty*. Deals with basic facts of the world food situation. Won British Film Academy Award. Size 16 mm., narration English, black and white, length 43 minutes.

II — *Common Concern* — Prod. 1947 by National Film Board of Canada with cooperation of Nordic Film, Copenhagen.

Demonstration of world food plan developed by FAO ; shows Mayor La Guardia, Mr John Strachey and Lord Boyd Orr at FAO Copenhagen Conference 1946. Size 16 mm., narration English, b. and w., length 20 min.

III — *Battle for bread* — Prod. March of Time, USA for UN Films and Visual Information Division of UN Department of Public Information. Sponsored by UN Film Board. Report of FAO at work, showing technical assistance to improve agricultural production in Italy, Poland, India and China, on animal health, infestation control, reafforestation and other problems. Size 16 mm., narration English, b. and. w., length 23 min.

Film made by FAO.

IV — *Renaissance d'une ferme* — Prod. 1948 FAO. Sponsored by UN Film Board. Complete record of a one-day soil conservation demonstration on a small farm in Maryland, U. S. A., showing some 30 different soil conservation practices. Size 16 mm., narration French, b. and w., length 11 min.

Other Films.

V — *Vegetable insects* — Prod. National Film Board of Canada. Shows common garden pests, their colours, marking, eating habits, how each species does its damage and how it may be destroyed. Size 16 mm., narration English, colour, length 22 min.

VI — *Decision for Bill* — Prod. U. S. Department of Agriculture. Advice on vocational choice in agriculture for a young man. Size 16 mm., narration English, colour, length 25 min.

VII — *Saving the Garden Crop* — Prod. U.S.A. Size 16 mm., narration English, colour.

VIII — *Strange Hunger* — Prod. U. S. A. Size 16 mm., narration English, b. and w.

IX — *Curing Pork Country Style* — Prod. U.S.A. Size 16 mm., narration English.

X — *Colorado Beetle* — Prod. International Committee on Colorado Beetle Control. Size 16 mm., colour, narration English.

XI — *Green Gold* — Prod. 1948 Svensk Filmindustri, Sweden, for UN Films and Visual Information Division of UN Department of Public Information. Sponsored by UN Film Board. Deals with world problems of timber, trade and conservation of forests. Indicates FAO's rôle in world timber production development. Size 16 mm., narration English, b. and w., length 20 min.

XII — *Vesicular Exanthema of Swine* — Size 16 mm., silent, English text, colour, length 400 ft.

XIII — *Avian pneumoencephalitis* — Size 16 mm., silent, English text, colour.

XIV — *Pullorum Disease Control* — Size 16 mm., silent, English text, colour.

XV — *Control of Bovine Tuberculosis* — Size 16 mm., silent, English text, colour.

FAO film strips

The FAO Information Division has produced the following film strips whose prints can be obtained on loan either from the FAO Information Division, 1201 Connecticut Avenue, N.W. Washington, D.C. or from the European Regional Office of FAO in Rome. Details on the purchase of prints can be obtained only from the FAO Information Division at the Washington headquarters.

(1) *Rice and health* — Silent, colour, 58 frames. This film strip presents the simple facts about nutrition. Taking rice as the basic food in Asia and the Far East, it shows what a good rice diet is, and why it is important for health. It is designed as an educational tool to assist experts in the intruction of workers who are carrying out public health, welfare and education programmes in South East Asia.

(2) *FAO in Asia* — Silent, black and white, 41 frames. Designed for general audiences. Features FAO technical help given to many countries in Asia and the Far East. Edition : combined English and Chinese. Script available in English, French, Spanish and Chinese.

(3) *Balancing food and people* — Silent, black and white, 58 frames. Designed for general audiences. Shows that the people of the world can all be fed properly, and describes the steps that FAO has already taken towards this end. Editions available in English, French, Spanish and Chinese. Script available in English, French, Spanish and Chinese.

(4) *Thieves of stored grain* — Silent, black and white, 52 frames. Designed to back up the work of the FAO Agriculture Division in spreading the latest knowledge of rat and insect control methods throughout the world. Suitable for general audiences. Editions : combined French, Spanish, English. Script available in English, French, Spanda Chinese.

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The World is Rich, a Paul Rotha production dealing with the work of FAO and sponsored hy the British Ministry of Food was given an award by the British Film Academy as the best documentary of 1947. The film deals with food shortage and the need for international co-operation to overcome it.

U N O

Committee on Agricultural Problems

The first session of the Committee on Agricultural Problems of the Economic Commission for Europe was held in Geneva from 3 to 5 October 1949. It will be remembered that this Committee was established at the Fourth Session of the Economic Commission for Europe and entrusted with the following functions :

(*a*) to ensure close collaboration between Governments in the agricultural aspect of the overall problem of European reconstruction and development ;

(*b*) to initiate studies and make recommendations with a view to developing the production of agricultural commodities and facilitating their exchange ;

(*c*) to co-operate with other organs of the Economic Commission for Europe regarding both industrial requisites for agricultural production and the exchange of industrial goods against foodstuffs.

In addition ECE adopted a special resolution embodying various suggestions relating to certain aspects of European agricultural problems arising from the system of peasant holdings ; and it particularly stressed the need for avoiding any duplication of work as between the new Committee and the technical committees already established.

A short survey of the considerable volume of documents prepared for the meeting will give an idea of its work :

A summary of the general situation of European agriculture in 1948, the apparent prospects for 1949 and the position as it should be in 1950 if the various plans or programmes prepared by the Governments can be implemented in full. A survey of changes that took place in 1948 in the industrial sector and certain effects on agriculture of Europe's improved economic situation. Description of the efforts made by Europe in 1948 to restore its trade with the other continents. A document on the gen-

eral features of the various forms of animal production in different European countries and the importance at present of imports of concentrated protein foods for its development. A historical survey of the evolution of cereal cultivation in Europe with the specification of factors to be taken into account in establishing a long-term cereal production policy. Documents on the importance of potato-growing, fats situation, problems of intra-European trade, industrial aspects of the production of fertilizers and agricultural machinery.

WHO and FAO combat malaria

Of three major diseases that plague mankind – malaria, tuberculosis and venereal – malaria takes the heaviest economic toll.

Some 300,000,000 people are estimated by WHO to suffer from malaria and most of them live in agricultural areas. The debilitating effect of the disease cuts sharply into productive labor. In Greece, alone, it is estimated that 30,000,000 man days a year were lost on the farms as a result of malaria before UN aid helped Greece save this lost work.

The Economic and Social Council had before it at its ninth session in Geneva, reports from both the WHO and FAO in which their plans are set forth for increasing world food production through an attack on malaria. Ten million acres in six areas now inadequately worked by disease-ridden farmers will be covered. The plan amounts to a five-year demonstration to member governments of both malaria control methods and their potential results.

The World Health Organization has set down long-term and short term objectives in its campaign against malaria. The immediate aims for 1950 are :

(1) to encourage and help governments, by proper assistance, to control malaria with modern methods with a view to stimulating them to control the infection on a nation-wide scale ;

(2) to show that control can be achieved within the budgetary possibilities of the country ;

(3) to show the indirect benefits derived from malaria-control, both with regard to public health in general and to increased agricultural and man-labor production.

To attain the short-term objectives for 1950, and to prepare the grounds for the long-term objectives, the following measures have been suggested :

(1) continuance of the offer of expert advice on malaria to the requesting governments ;

(2) continuance, for the second year, of the malaria-control demonstrations carried out in 1949 with the cooperation of FAO, some with the benefit of UNICEF's (UN Children's Emergency Fund) financial assistance ;

(3) the starting of new demonstrations in 1950 ;

(4) procurement of supplies for countries not in a position to obtain them and which are willing to carry out campaigns in cooperation with WHO to intensify training of personnel and to set up training facilities in areas not yet provided with them ;

(5) the carrying out of research under the terms by WHO's expert committee ;

(6) an attack on the problem of African malaria with a view to opening up the continent to large-scale development ;

(7) the planning and carrying out, in collaboration with FAO, of broad-scale programs of malaria control of public health improvements and of overall rural rehabilitation in large areas.

CONFERENCES
CONGRESSES
METIENGS

Conferences and Congresses

SEPTEMBER

1 to 10
Geneva, ILO Permanent Agricultural Committee, 3rd Session.

3 to 10
Berne, International Statistical Institute, 26th Session.

3 to 16
Paris, UNESCO Executive Board, 16th Session.

5 to 9
Geneva, FAO European Forestry and Forest Products Commission.

12 to 16
Washington, FAO Committee on Calorie Requirements.

12 to 17
Beirut, FAO Near East Pre-Conference Regional Meeting.

12 to 24
Alexandria, WHO Regional Committee for Eastern Mediterranean.

12 to 24
Geneva, UN Sub-Commission on Statistical Sampling, 3rd Session.

13
Washington, International Monetary Fund, 4th Annual Meeting, Board of Governors.

13
Washington, International Bank for Reconstruction and Development, 4th Annual Meeting, Board of Governors.

SEPTEMBER

14 to 16
Copenhagen, International Council of Scientific Unions, General Assembly.

15 to 17
Geneva, ECE Inland Transport Committee, Study Group on Perishable Foods Transport, Sub-Commission on Refrigerator Rail Transport.

18
Quito (Ecuador) FAO Latin American Pre-Conference Regional Meeting.

19
Paris, UNESCO General Conference, 4th Session.

19 to 23
Geneva, FAO/ECE Timber Committee.

19 to 24
Rome, FAO Meeting to consider Desirability of Establishing Special Regional Fisheries Council for Mediterranean.

19 to 28
Beirut, FAO Conference on Locust Control.

20
Lake Success, UN General Assembly, 4th Session.

26 to 28
New Delhi, WHO Regional Committee for South East Asia, 2nd, Session.

26 to 30
Rome, FAO European Committee on Agricultural Technology.

26 to 30
Singapore, FAO Far East Pre-Conference Regional Meeting.

26 to 30
Geneva, ECE Inland Transport Committee, Study Group on Coordination of Transport.

26 to October 8
Geneva, ILO 7th International Conference of Labour Statisticians.

OCTOBER

1 to 3
Singapore, ECAFE/FAO Joint Meeting on Selected Economic Problems in ECAFE Region.

3 to 5
Geneva, ECE Committee on Agricultural Problems.

3 to 10
Tschang (French Cameroons), FAO Nutrition Conference in Africa.

3 to 14
Cairo, FAO Livestock Breeding in Tropics and Sub-Tropics.

4 to 11
Edinburgh, International Council for the Exploration of the Sea.

5
Singapore, ECAFE Meeting of Inland Transport Experts.

OCTOBER

10
Rome, FAO European Pre-Conference Regional Meeting

13 to 15
Karachi, Meeting Desert Locust Control (Pakistan Government).

17 to 24
Geneva, Advisory Committee on Cooperatives (ILO)

20
Singapore, ECAFE, 5th Session.

23 to November 3
Lucknow, FAO Conference on Cooperatives in Far East.

24 to 28
Geneva, FAO/WHO Joint Committee on Nutrition.

26 to 28
Paris, International Dairy Federation Meeting, Fresh Milk Commission.
Lake Success, UN Administrative Committee on Coordination.

NOVEMBER

2
New Delhi, UNESCO International Seminar on Rural and Adult Education.

3 to 10
Paris, International Congress on Animal Production.

7
Washington, FAO Preparatory Committee of the Council,

7 to 15
Conference on Soil Utilization.

14
Washington, FAO Council, 7th Session.

14
Paris, UNESCO Film Production Committee.

17 to 24
Jos (Nigeria), Rural Indigenous Economy Conference.

21
Washington, FAO Conference, 5th Session. (immediately prior to Annual FAO Conference).
FAO Committee on Unexploited Forests.

DECEMBER

7 to 16
Zurich, Meeting on feedingstuff problems (FAO)

Fairs and Exhibitions

SEPTEMBER

2 to 13
Budapest, International Fair.

3 to 19
Strasbourg, Strasbourg Fair.

4 to 21
Bari, International Fair of the Levant.

6 to 15

Utrecht, Royal International Netherlands Fair.

7 to 14

Vienna, International Fair.

8 to 19

Parma (Italy), 4th International Preserved Food Fair.

10 to 20

Marseille, International Fair.

10 to 25

Lausanne, Comptoir suisse.

10 to 25

Ghent, Ghent International Fair.

10 to 26

Turin, International Exhibition of Trade Exchange between Western European countries.

17 to Oct. 2

Brussels, Fair of Flanders (Stand of the Board of Trade).

23 to Oct. 9

Antwerp, Benelux Fair.

24 to Oct. 3

Aurillac, Commercial, Agricultural, Industrial, Handicrafts Fair.

24 to Oct. 9

Lyons, 1st International Exhibition of Rural Housing.

29 to Oct. 2

Brie-Comte-Robert (France) 26th International Exhibition of Power Agriculture.

October

1 to 16

Brussels, Food and Housekeeping Show.

2 to 17

Padua, International Fair.

5 to 16

Geneva, Geneva Fair.

6 to 16

Paris, International Show of Packing, Bottling and Connected Industries.

7 to 17

Saint-Gall, Swiss Agricultural Economy Fair.

7 to 17

Toulouse, The Friends of Housewifery Arts.

12 to 22

Manchester, International Exhibition of Textile Machines and Attachments.

12 to 15

Verona, International Horse and Agricultural Fair.

13 to 23

Lugano, Swiss Fair.

25 to 28

London, Annual Dairy Exhibition.

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A *North African Citrus Conference* was held in Algiers at the beginning of June 1949. The agenda of this Conference mainly concerned production trend, coordination of the export trade, unification of standards, phytosanitary regulations, North African Citrus Congress.

This meeting has laid the groundwork for wider action in the citrus-growing field. The continuation of the work of the Conference will be assured by a *North African Permanent Committee for coordination, action and the citrus trade*, set up at the time of the Conference and to be located in Algiers.

* * *

From 4 to 7 June 1949 Palermo (Italy) was the scene of the *First International Congress of Mediterranean citrus-growing* which had been organized by the Italian General Federation of Agriculture and which was attended by representatives of the principal Mediterranean citrus-growing countries. During this Congress it was decided to set up a Mediterranean citrus-growing Liaison Committee for the propagation of information on production improvement and development, citrus processing and trade. A special Commission will pave the way for the active working of the final organization ; it will also concern itself with obtaining and facilitating in the countries interested, the establishment of National Sectors ; it will elaborate the plan of the statutes of the Liaison Committee and submit it to the said National Sectors. This Commission will have its seat in Palermo.

The Liaison Committee will be supplemented by an Assembly composed of three representatives for each Mediterranean country interested in citrus-growing.

LEGISLATIVE NEWS

SUMMARY : International union for protection (Belgium). — II. Foodstuffs: (*a*) Organization of general food control (Algeria) ; (*b*) Bread, edible pastes, biscuits and 'strong' wheat-flours (Algeria, France, Luxembourg) ; (*c*) Colouring and conservation of foodstuffs (Madagascar, Morocco) ; (*d*) Edible oils (Algeria) ; (*e*) Sugar (Algeria, Portugal) ; (*f*) Tea (Algeria). — III. Agriculture : (*a*) Cereal crops (Algeria) ; (*b*) Modernization of production methods (Morocco) ; (*c*) Seed (France, Morocco) ; (*d*) Forage crop seed (Algeria) ; (*e*) sugar and alcohol producing plants (Algeria) ; (*f*) Soil erosion (Algeria, Madagascar) ; (*g*) Farm explosives (Algeria) ; (*h*) Phytosanitary control (Algeria); (*i*) Agrarian reform, restriping agricultural contracts (Belgium, France, Italy) ; (*j*) Agricultural credit (Algeria, Madagascar) ; (*k*) Stockbreeding (Algeria, France, Madagascar, Morocco) ; (*l*) Livestock sanitary police regulations (Algeria, Madagascar, Morocco) ; (*m*) Sericiculture (Italy) ; (*n*) Excise dues (Algeria). — IV. Economic affairs and markets : (*a*) Multipartite agreements : International Wheat Agreement (France, Portugal); (*b*) commercial treaties, economic agreements, etc. (Belgium, Italy); (*c*) Foreign trade (Algeria, Belgium, France, Morocco) ; (*d*) Customs duties and duty-free imports (France, Portugal) ; (*e*) Conditioning and technical inspection of export commodities : (*i*) feedingstuffs (France, Morocco); (*ii*) preserved foods (France) ; (*iii*) eggs (Morocco) ; (*iv*) onions (Morocco) ; (*v*) pears (Italy) ; (*vi*) rice (Italy) ; (*vii*) vinegar (Morocco) ; (*f*) Preserved tomatoes, fruits and vegetables (Morocco) ; (*g*) Price control and fixing : (*i*) slaughter animals and meat (France) ; (*ii*) preserved fish (Algeria) ; (*iii*) lifting of price controls on imported goods (Algeria) ; (*iv*)) fertilizers (Belgium) ; (*v*) edible oils (Algeria) ; (*vi*) barley (Algeria) ; (*vii*) cheeses (Belgium) ; (*viii*) tea (Algeria) ; (*h*) Butter (Luxembourg) ; (*i*) Potatoes (Algeria) ; (*j*) Rice and paddy (Madagascar). — V. Forestry : (Algeria France, Morocco). — VI. Game (France). — VII Fishery : (*a*) International conventions (Belgium) ; (*b*) Professional organization (Algeria) ; (*c*) River fishery (Italy, Morocco) ; (*d*) Preserved fish, fish meal and oils (Algeria, Morocco). — VIII. Rural welfare : (*a*) Holidays with pay (France) ; (*b*) Cooperation (Algeria, Italy) ; (*c*) Rural electrification (Morocco) ; (*d*) Rural community centres (Algeria) ; (*e*) Home industries (Switzerland).

I. - INTERNATIONAL UNION FOR NATURE PROTECTION

BELGIUM

A Decree of the Regent dated 15 May 1949 (*M.B.*, *N°* 157-158-159, 6-7-8 *June* 1949, p. 5176) grants legal status to the International Union for Nature Protection, centred in Brussels. The statutes of the Union appended to the Decree are approved by said Decree of the Regent.

The International Union for Nature Protection was set up in conformity with the decision of the international conference held at Fontainebleau (France) from 30 September to 7 October 1948. The Union promotes and facilitates international cooperation between the States and national and international organizations and persons interested in 'Nature Protection'. The Union recommends and favours and international action relative to : (*a*) The protection in all parts of the world of wildlife and its environment, soil, watercourses and forests, including preserves and protection zones, specimens, animals, plants of scientific, historical or aesthetic importance, especially national parks, preserves and natural monuments, sanctuaries for wildlife, for the purpose of preventing the extinction of threatened species ; (*b*) the diffusion of information on 'Nature Protection' ; (*c*) the execution of an extensive educational program ; (*d*) the preparation of draft international agreements and a world convention and (*e*) all scientific research regarding 'Nature Protection'.

The Union assembles, analyzes, interprets and diffuses all information relative to 'Nature Protection' by transmitting to the states, national and international organizations, the documents, legislative texts, scientific surveys and other data concerning 'Nature Protection'.

II. - FOODSTUFFS

(*a*) Organization of general food control

ALGERIA

Order of 22 March 1949 (*J. O. A. Part* 1 *N°* 24, 25 *March* 1949, *p.* 363) suppresses the regional and local food control organization in Algeria, set up by Order of 2 November 1942.

(*b*) Bread, edible pastes, biscuits and 'strong' wheat-flours

ALGERIA

An Order of 28 February 1949 (*J. O. A.., Part I, N°* 17, 1 *March* 1949, *p.* 275) derations edible pastes and semolina for couscous. Ration control regulations are no longer enforced in retail selling.

Another Order of 23 May, (*J. O. A., Part I, N°* 42, 27 *May* 1949, *p.* 622) abrogates the regulations still in force restricting the preparation, sale and consumption of cakes, pastry, biscuits and confectionery.

FRANCE

An Order of 9 May 1949 (*J.O., N°* 111, 9 *and* 10 *May* 1949, *p.* 4557) establishes the extraction rate of rye flour, in prescribing the incorporation of this product in flour for bread.

The extraction rate of rye flour is fixed at 7 points below the specific weight, beginning from 15 May 1949. This rate applies to rye not containing more than 2 per cent. impurities. As from the same date 15 May 1949, the admixture percentage of rye flour in wheat flour is fixed at 10. This admixture, however. may be raised to 15 per cent. in the departments indicated by the Food Ministry where the wheat harvest effected by 1 May 1949, proved to be particularly poor.

LUXEMBOURG

An Order of May 14, 1949 (*M. L. N°* 26, *June* 21, 1949, *p.* 585) establishes the mixing ratios for bread grains and the ash content of flour.

The mixing ratios for grain to be used in making ordinary, subsidized bakers' flours; unsubsidized white flour; home grown rye flour and the so-called 'regime' flours, are established as follows: for ordinary bakers' flour, native wheat 40%, native rye 30%, imported wheat 30%; for white flour, native wheat 50%, native rye 20%, imported wheat 30%. As from May 16, 1949, the minimum and maximum mineral content of bakers' flour is also fixed.

Another Order of May 14, 1949 (*ibidem* p. 586) repeals the order of 15 September 1948 making the delivery of bread grains compulsory.

(*c*) Colouring and conservation of foodstuffs

MADAGASCAR

An Order of December 6, 1948 (*J. O. L. N°* 3319, *January* 1, 1949, *p.* 5), contains provisions relating to the colouring, the melioration, the conservation and the packing of foods and beverages.

In all cases not specifically provided for by the regulations issued under article 11 of the Act of August 1, 1905, on the prevention of frauds in the sale of goods, and the adulteration of foodstuffs and agricultural products, whether natural or processed, the addition to beverages and foodstuffs of chemical substances other than ordinary salt is forbidden.

The following exceptions are allowed: (1) the addition to meats and preparations, so as to allow of their conservation, of salt mixed with not more than 10% of potassium nitrate, or of salt mixed with bicarbonate of soda; (2) the use of sulphuric acid for the conservation of dry foodstuffs; (3) the use of the strictly indispensable quantity of sulphurous acid and pure alkaline bisulphites for the partial decoloration of fruit for bleaching mushrooms. It is forbidden to place beverages and foods in direct contact with copper, zinc, or galvanized iron, and with containers, utensils, or apparatus consisting in all or in part of an alloy containing more than 10% of lead or more than 1/10,000th of arsenic.

Other provisions deal with the outside of containers, the use of tin and lead alloys the capsules to be used for closing containers used for substances intended for food purposes. The parties concerned are allowed a delay of one year within which they must conform with the requirements of the rule regulating capsules. Other regulations prohibit the use of spotted or coloured paper known as 'painted paper, and of written or printed paper in direct contact with foodstuffs.

The artificial colouring melioration, or conservation of beverages and foodstuffs are allowed subject to the conditions laid down in a table annexed to the Order. The table states the substances of which the use in authorized in the quantities strictly necessary for colouring the beverages or foods in accordance with established custom.

MOROCCO

An Order issued by the Director of Agriculture, Commerce and Forests, of February 15, 1949 (*B. O. N°* 1897, *March* 4, 1949, *p.* 268) contains provisions regulating the use of bisulphites and alkaline sulphites in the preparatory treatment of fruit and vegetables to be preserved by drying or dehydration.

As an exception to the provisions of the Vizirs' Order of February 6, 1916, implementing the Acton the use of antiseptic substances, colouring matter, and artificial flavours for foods and beverages, soaking in solutions of bisulphites and alkaline sulphites is allowed in the preparatory treatment of fruit and vegetables on condition that: (1) the quantity of bisulphites or sulphites in the solution must never exceed 1%; (2) the soaking must not last more than a few minutes. In no case may sul-

phites or alkaline bisulphites be used for the permanent conservation of the product which, when ready for sale, must contain no trace of these antiseptics.

(*d*) Edible Oils

ALGERIA

An Order of March 25, 1949 (*J. O. A. Part* I, *N°* 25 *March* 29, 1949, *p.* 370), derations refined edible olive or seed oils as from April 1, 1949. The provisions regulating the importation, collection, manufacture, pooling, and distribution of oils until the stage of retail sale is reached, remain in force. So do the legislative regulations referring to prices, as set forth in Order N° 45-1483 of June 30, 1945, on prices.

Holders of oil, other than retail merchants, are required to make periodical returns of stocks held as prescribed by the regulations issued, and specifically by the Order of October 28, 1940, on the control of holders stocks of essential foodstuffs.

Another Order of April 25, 1949 (*J. O. A. Part I, April* 26, 1949, *p.* 468), replaces the provisions of the Order of November 15, 1948, on the organization of the oil season 1948-1949. The making of olive-oil is free, subject to the observance of the provisions relating to the distinctive features of olive-oils and the drawing up of periodical returns. Moreover, the whole quantity of olive-oils produced in Algeria may be exported abroad in conformity with the regulations in force.

Lastly, the circulation and trade in edible oils (olive-oils and seed-oils) is free throughout the Algerian territory.

(*e*) Sugar

ALGERIA

An Order of March 26, 1949 (*J. O. A. Part I, N°* 25, *March* 29, 1949, *N°* 370), derations sugar as from April 1, 1949. Consequently retail merchants may apply to the wholesalers of their choice for delivery of the quantities required to meet the needs of their customers. The wholesalers will obtain their supplies from general revictualling warehouses. They are required to send in periodical returns of stocks as prescribed by the Order of October 28, 1940, regulating the conditions for returns on stocks of essential foods in the hands of holders.

The regulations in force relating to the importation and pooling of sugar by the General Revictualling Authority have not been amended. The legislative measures and regulations relating to prices also remain in force.

PORTUGAL

A Decree-Law, N° 37-456 of June 24, 1949 (*D. d. G., Ist Series, N°* 136, *June* 24, 1949, *p.* 460) sets up a transitory regime of three years duration for provisioning the Mother Country with colonial sugar.

Under this Decree-Law the Minister of Finance is empowered to fix by Order the quantity of sugar that will probably be required for consumption in each sugar year, these imports will enjoy the 50% differential tariff rate. For the current sugar year, which runs from May 1 to the following April 30 the quota to be supplied by the Mozambique and Angola planters is fixed at a total of 90,000 tons to be supplied in like shares by the two colonies.

Sugar of foreign or colonial origin pays the 'national safety' customs sur-tax.

The export to foreign countries of sugar from the said colonies is only allowed in those cases in which the producers can prove that they have already supplied or ear-marked for the consumption of the Mother Country the entire quote assigned them.

(*f*) Tea

ALGERIA

An Order of February 28, 1949 (*J. O. A., Part I, N°* 17, *March* 1, 1949, *p.* 277) derations black teas.

As from March 1, 1949, retail merchants may freely sell to their customers the black tea they hold. No amendment has been made in regulations in force on the importation, pooling, and distribution of black teas at the merchant-importer, and wholesale-dealer stages. Likewise, the legislative measures and regulations relating to prices as laid down by the Order of N° 45-1483 of June 30, 1945 on prices remain in force. All holders of black teas, except retailers, are required to send in the periodical returns on stocks contemplated by the Order of October 28, 1940, regulating the conditions for returns on stocks to be made by holders of essential foodstuffs.

III. - AGRICULTURE

(*a*) Cereal crops

ALGERIA

An Order of December 29, 1948 (*J. O. A., Part I, N°* 1, *January* 4, 1949, *p.* 1), requires the farmers to deliver or place at the disposal of the pool authorities before January 1, 1949, any quantities of soft or hard wheat in excess of the needs of their farms.

An Order of May 31, 1949 (*J. O. A., Part I, June* 3, 1949, *p.* 682) contains measures for the organization of the cereal year 1949-1950.

Cereal growers are required to make a return for their crop, whatever be its size, before November 1, 1949. The return must state the the amount of grain held for the needs of the farm, and specify the quantity kept for personal consumption, for the needs of workers, for seed, for feeding to stock, the quantities delivered as rent, metayer dues, etc., mentioning the name of the beneficiary; the quantity available for sale and the pool to which the farmer wishes to deliver this quantity.

Other provisions contained in the order relate to the use to be made of the crop, the marketing and pooling, the circulation of cereals, etc. The provisions of the Order are applicable to hard wheat, soft wheat, barley and oats.

(*b*) Modernization of production methods

MOROCCO

An Order of the Resident of March 9, 1949 (*B. O., N°* 1899 *March* 18, 1949, *p.* 327) establishes the plan for the use of the credits opened on extra budget account for the 'Fund for the modernization and equipment of Morocco'.

Among the credits authorized are those for meeting expenses relating to the modernization of the methods of production of the Moroccan peasants, for a total of 300 million francs. This credit may be paid as a subsidy to the Central Station for the agricultural equipment of the peasantry.

Another credit of 2,725,000,000 francs is assigned for agricultural and industrial hydraulic works and for seeking for water and providing for its supply.

A sum of 200 million francs is assigned as a contribution to the building and organization of cold storage plants.

(*c*) Seed

FRANCE

A Decree N° 49-773 of June 11, 1949 (*J. O. N°* 140, *June* 13 *and* 14, 1949, *p.* 5876) contains the public administration regulations for the enforcement of the Act of August 1, 1905 on the prevention of frauds in the seed trade. The provisions of the decree are applicable to all commercial transactions, inclusive of importation and exportation whether transacted by merchants or by approved associations or cooperative societies, dealing with seeds or saplings, plants or parts of plants of any kind, for delivery as such to the users for purposes of reproduction or multiplication.

The description of seeds or saplings belonging to a species entered in the register of species and varieties must be in keeping with the denomination under which the variety considered is mentioned in the said register. New varieties, whether imported or not, cannot be sold as seeds or saplings until they have been entered in the register of species and varieties.

Seeds or saplings transported with a view to sale, placed on sale, or sold, must satisfy certain specific conditions of purity, and possibly also of variety, germinating power, origin, gauge, and sanitary condition, as required by the rules laid down in the Decree, and defined by the orders issued by the Minister of Agriculture for the enforcement of the Decree.

MOROCCO

A 'dahir' of February 22, 1949 (*B. O. N°* 1900, *March* 25, 1949, *p.* 367) amends the 'dahir' of May 4, 1940, regulating the production of cereal seeds in Morocco.

Pursuant to this amendment the technical supervision of cereals raised for the purpose of seed production gives rise to the collection of a tax at the rate of 25 francs per hectare returned as planted to this crop, the minimum amount collected to be 250 francs per farm, as established by the Vizir's Order February 26, 1949 *ibidem p.* 368).

(*d*) Forage crop seed

ALGERIA

An Order of February 24, 1949 (*J. O. A. Part I, N°* 18, *March* 4, 1949, *p.* 290) requires that imported clover and lucern be stained.

As from February 24, 1949, all lucern or clover, forage seed more especially clover of Alexandria, imported from abroad or from the French Union, either directly or in transit from the Mother Country, must contain not less than 6% in weight of seed artificially staineed red by soaking in a 1% water solution of fuscin, saframin, or rhodamine.

(*e*) Sugar and alcohol producing plants

ALGERIA

Decision N° 49-009 of the Algerian Assembly, ratified by a Decree of January 14, 1949 (*J. O. A. Part I, N°*, 8, *January* 28, 1949, *p.* 82) sets up a due on beet-alcohol distilled in Algeria, to be used for financing measures for encouraging the cultivation of plants containing sugar and alcohol. The rate of this special due is equal to the amount collected by the Alcohol Service on the purchase price of beet-alcohol under the tax set up in the Mother Country for the benefit of the 'National Fund of Agricultural Solidarity' by the Act N° 46-854, of April 27, 1946.

(*f*) Soil erosion

ALGERIA

An Order of June 14, 1949 (*J. O. A. Part I, N°* 48, *June* 17, 1949, *p.* 751) contains provisions relating to soil conservation in Algeria.

The Governor General specifies the soil defence and restoration areas for which a declaration of public utility must be made, under art. 1 of the Act of February 2, 1941, on the soil restoration of Algerian watersheds. The decision has been taken in consideration of a file prepared by the Soil Defence and Restoration Service, including (1) a general plan on the scale of 1/200,000th, and the detailed plans and those of the land-parcels required to make the general proposal clear; (2) a description of the boundaries of the area; (3) a description giving useful geographical, social and economic data; (4) an account of the works required for the protection of the soil against erosion and of the damage caused by water trickling,; (5) an account of the measures to be taken for the general protection of plantations and works and, when needed, for the preservation and organization of grazing lands; and (6) a Report submitting and justifying the project as a whole.

MADAGASCAR

An Order of October 19, 1948 (*J, O. M.. N°.* 3322, *January* 22, 1949, *p.* 113), completes the order of January 28, 1948, setting up a Soil Conservation Bureau by adding to the members of the Committee foreseen under articles 3 and 7 of the said Order, the Director of the Meteorological Service.

(*g*) Farm explosives

ALGERIA

An order of April 12, 1949 (*J. O. A., Part I, N°* 30, *April* 15, 1949, *p.* 430) contains provisions relating to the use of explosives for agricultural purposes in Algeria.

Degraded explosives selected from among those whose decomposition products are not injurious to vegetation, described as explosives for agricultural use, may be delivered to farmers in wooden cases (*cartouches*) by the workshops authorized by the Gunpowder Service to encase explosives, to be used for blowing up rocks and eradicating stumps on lands to be used for plantations, and for subsoiling.

The Explosive Packing Workshops will only deliver these explosives to the farmers after presentation of a permit issued by the Prefect.

The order contains detailed instructions for the preparation of explosives for agricultural purposes, the supervision of the workshops where they are encased, the steps to be taken to obtain the permit, the quantity of explosives that may be received by one farmer, the checks to make sure that the whole quantity of the said explosives has been used within a period not to exceed ten months, etc.

(*h*) Phytosanitary control

ALGERIA

An Order of January 17, 1949 (*J. O. A., Part I, N°* 6, *January* 21, 1949, *p.* 62) completes the order of November 8, 1945, establishing the list of animal and vegetable parasites against which Algerian crops should be protected, adding to the list of vegetable parasites the date *bayoud* (*Fusarium albedinis M.*).

An Order of April 11, 1949 (*J. O. A. Part I, N°* 33, *April* 26, 1949, *p.* 466) contains provisions for the supervision of the circulation of vine cuttings.

Whatever be the means of transport used, the circulation on Algerian territory and placing on sale of vine cuttings, shoots, plants, scions is only allowed in the case of products coming from nurseries placed under government supervision and entered on the official list of classified nurseries issued each year not later than November 1. All fresh shoots of the American vine or of direct reproducing hybrids are held to be cuttings for reproduction.

An annex to the Order gives the form of the certificate of origin which must accompany the products above listed during transportation from the nurserv until delivery at the place of utilization. This certificate must be shown whenever the agents of the Plant Protection Service or other Inspectors with supervising duties ask for it. The penalty for a violation of the Order is the confiscation of the goods followed by the other penalties provided by law.

(*i*) Agrarian reform, restriping and agricultural contracts

BELGIUM

The Act of May 4, 1949 (*M. B. N°* 53, *June* 2, 1949, *p.* 4965) contains measures for promoting the voluntary restriping of farm holdings.

Under this Act, when two or more landowners have decided by mutual agreement to restripe their farm properties, and have fulfilled the required conditions, they are entitled to the benefits of the Act under an Order issued jointly by the Minister of Agriculture and the Minister of Finance, at the request of the land owners concerned in the proposed restriping plan. The Ministerial Order approving the restriping plan assures the landowners the free assistance of the public services for the work of surveying and fixing the boundaries, making studies for road-making, the drainage of surface waters, and other works, and the drawing of the definite plans.

The Act contemplates special reduced fees for the deeds drawn up by notaries, for registration, mortgage fees and court fees, relating to restriping agreements.

FRANCE

Act N° 49-787 of June 15, 1949 (*J. O. N° 142, June 16, 1949, p. 5950*) contains provisions relating to the cumulation of farms in the hands of one farmer.

The Act repeals and replaces by a new text article 45-bis of the Order of October 17, 1945, amended by the Act of April 13, 1946. Under the new text, farm lands which, since September 1, 1939, have been joined together or been the object of cumulative working, as a result of which farm families — landowners, tenants, or métayers — have left willingly or been evicted, may be returned to be operated as family farms before January 1, 1951, if the reasoned opinion of the advisory committee on farm leases should favour such action.

The Prefects are required to fix for each natural region the minimum areas in excess of which the reunion and accumulation of farms in the hands of one and the same farmer may be called to question. The farmers operating such holdings are entitled to choose the holding or holdings they wish to continue operating. Holdings which could be restored to use as family farms may, prior to September 29, 1949, be leased by amicable agreement, in which case it will be stipulated in the covenants of the lease that the date for taking possession will be the nearest annual farm term. As from the same September 29, 1949, any person concerned, of French nationality, who has no farm holding, may obtain from the joint Cantonal Court an order for the leasing of such lands for his use, within the limits of the area which he himself can personally operate.

ITALY

Act N° 353 of June 25, 1949 (*G. U. N° 153, July 7, 1949, p. 1778*) extends the duration of farm leases, métayage agreement and crop-sharing and co-participation agreements, and the grants of uncultivated or insufficiently cultivated lands.

The duration of the said agreements, whether verbal or written, is, as a rule, extended for the whole of the agricultural year 1949-50.

(*j*) Agricultural credit

ALGERIA

An Order of January 27, 1949 (*J. O. A., Part 2, N° 10, February 4, 1949, p. 122*) fixes the rate of interest on loans of the Agricultural Loan Bank (*Caisse de prêts agricoles*) for the agricultural year 1948-1949. The rate is fixed at 2 % above the interest rate on the advances made to the said Bank for loans for the agricultural year 1948-1949. However, in the case of funding loans for the same agricultural year, the rate of interest remains fixed at 1.50 % above the rate on the aforesaid advances made by the Bank of Algeria.

A Decree of January 31, 1949 (*J. O. A., Parte I, N° 11, February 8, 1949, p. 134*), ratifies certain decisions approved by the Algerian Assembly on agricultural credit.

A Decision N° 49-020, amends the first paragraph of art. 7 of the Decree of November 20, 1925, on the reorganization of mutual credit and agricultural cooperation in Algeria. The Mutual Agricultural Credit Banks are empowered to make short term loans, by discounting bills endorsed by their members. They may also make loans by opening a current account guaranteed by the deposit of notes (*bons de caisse*) issued by the Algerian Bank of Cooperative Agricultural Credit (*Caisse algérienne de crédit agricole mutuel*).

Another Decision N° 49-021 deals with the assignment of cooperative agricultural credit loans to farmers and rural craftsmen, prisoners of war, repatriated persons, ex-deportees, and war veterans, amending some clauses of the Decision N° 48-018 issued by the same Financial Assembly of Algeria.

A third Decision N° 49-022, amends some clauses of the Decision N° 48-019 of the Financial Assembly of Algeria, relating to the assignment of establishment loans by the Cooperative Agricultural Credit bank to young farmers. The amount of these loans is raised to a maximum of 1 million francs.

Another Decree of March 23, 1949 (*J. O. A., Part I, N° 29, April 12, 1949, p. 415*) ratifies Decision N° 49-030 approved by the Algerian Assembly, amending certain clauses of the Decree of November 26, 1925, on the reorganization of cooperative credit and agricultural cooperation in Algiers.

Under these amendments, the agricultural syndicates may only receive short term and medium term loans if authorized to do so by their articles of association, if they can offer adequate security, if they are administered free of cost, and if they are not profit earning.

Other amendments relate to agricultural associations, agricultural cooperative societies and their unions, agricultural societies of collective interest, etc. There are some rules regulating the admission of cooperative societies and their unions for which an Acceptance Committee is set up in the Algerian Council of Agricultural Cooperation.

MADAGASCAR

An Order of January 14, 1949 (*J. O. M. N° 3322, January 22, 1949, p. 113*) repeals the Order of July 23, 1939, and fixes the new rates of interest of short, medium, and long term loans granted by the Agricultural Credit Bank (*Crédit agricole*).

The interest rates charged on loans granted by the Central Agricultural Credit Bank (*Caisse Centrale de crédit agricole*) are fixed as follows : short-

term, 5.50 ; medium-term, 5.00 ; long-term, 3.50 per cent. per annum. On these rates the local banks are entitled to a cancellation (*ristourne*) of 1% on short-term loans and of 0.50% on medium and long-term loans. If the borrowers are agricultural communities such as cooperative societies, agricultural associations, or syndical associations, they are entitled to a share of the interest : 0.50% on short-term loans, but in such cases the local Bank to which the borrowing organizations are affiliated is not entitled to the cancellation.

(*k*) Stockbreeding

ALGERIA

An Order of January 14 1949 (*J.O.A. Part I, N° 6, January 21, 1949, p. 62*) repeals the Order of May 28, 1948, regulating the slaughter of cows in calf. In conformity with the provisions of the Order of June 27, 1921, forbidding the slaughter of cows with calf throughout the territory of Algeria, the slaughter of female cattle with young continues to be forbidden.

FRANCE

An Order of April 30, 1949 (*J. O. No. 115, May 14, 1949, p. 4772*) amends some provisions of the Order of April 24, 1948, establishing the procedure for enforcing the rules regulating the artificial insemination of domestic animals.

Under these amendments, the qualified official, delegated by the Minister of Agriculture for approving male breedingstock to be imported from abroad, has to be informed direct by the station concerned of its intention to purchase a male breeder from abroad. The official will examine the animal before it enters Frence. Moreover, artificial insemination stations may be authorized to take the semen of breeding stock belonging to a private person or to an organization which does not operate an artificial insemination station, for the purpose of artificial insemination, subject to certain conditions relating to health, etc.

ITALY

A Presidential Decree, No. 337 of May 7, 1949 (*G.U., N° 148, July 1 1948, p. 1708*) contains provisions for encouraging quality production and selection of Italian livestock. The Decree makes it compulsory to castrate male horses and asses who are not approved for covering purposes in the departments of Crema, Ferrara and Reggio Emilia.

MADAGASCAR

An Order of January 3, 1949 (*J.O.M. N° 3321, January 15, 1949, p. 68*) lays down the conditions for admission into Madagascar and its Dependencies, duty free, of thoroughbred breeding-stock and eggs to be hatched.

The Order makes duty free admission of horses, cattle, sheep, goats, swine, and live poultry for breeding purposes, subject to certain conditions. One month prior to the arrival of the animal in Madagascar the importer must forward to the Head of the Stock- Breeding Service of the General Government at Tananarive an applicationin four copies, drawn up on the form annexed to the Decree. The application will be approved if the importation is of importance for improving stock-breeding. On presentation of the authorization, the Custom's Authorities will admit the animals duty-free.

Likewise eggs for hatching are only admitted duty-free on presentation by the importer of a certificate issued by the Chief of the Stock-Breeding Service in conformity with the form annexed to the Decree.

MOROCCO

An Order of the Vizir of March 6, 1949 (*B. O. N° 1901, April 1, 1949, p. 410*), amends the order of June 15, 1935 laying down the conditions for the grant of a bonus to importers of breeding-stock of certain kinds, to offset customs and transport charges.

Under the terms of this amendment the importation into Morocco of male animals of the species cattle, sheep, pigs, goats, horses and asses, entitle the importers to receive an import bonus for those animals that the Stock-Breeding Service considers likely to improve local breeds.

(*l*) Livestock sanitary police regulations

ALGERIA

An Order of January 28, 1949 (*J. O. A. Part I, N° 10, February 4, 1949, p. 124*) adds fowl plague to the list of contagious diseases entailing the enforcement of the measures provided in the Decree of November 12, 1887, on the animal health service in Algeria. The measures to be taken in the case of fowl plague were laid down in an Order of March 12, 1949 (*J. O. A. Part I, N° 23, March 22, 1949, p. 351*). They require that the dead birds within the area declared infected be buried in ground situated at least 100 metres from dwellings, wells, springs, and water courses, and be covered by a layer of quick lime to a depth of at least one metre.

It is forbidden to offer for sale birds that have died or been slaughtered ; to sell the eggs for other purposes than those of biscuit factories, and to introduce into the area declared infected eggs for hat ching, and birds of any description. These measures may cease to be enforced after the places have been disinfected and when at least two months have elapsed since the last case of illness was recorded.

MADAGASCAR

An Order of February 1, 1949 (*J. O. M.* N° 3324, *February* 5 1949, *p.* 180), adds *brucellosis* in ruminants, swine, and horses, and contagious paralysis of swine to the list of contagious diseases of animals considered by the Decree of March 13, 1937, regulating animal health measures in Madagascar and its Dependencies.

MOROCCO

An Order of the Vizir of March 12, 1949 (*B. O.* N° 1901, *April* 1, 1949, *p.* 410) notifies the precautions to be taken against swine fever erysipelas.

It is forbidden to remove swine from the farms proclaimed infected by swine-fever except to supervised slaughter-houses, in which case they must be conveyed there in an isolation truck. The animals going to the slaughter-house must be accompanied by a special pass-card issued by the veterinarian inspector of the district. The trucks used for conveying the swine from the farms declared infected, are disinfected under the supervision of the Stock-breeding Service. The pig-styes are also disinfected before the removal of the declaration of an infected area which can only be granted when 40 days have elapsed since the last case of illness was reported.

A 'dahir' of April 19, 1949, (*B. O.*, N° 1910, *June* 3, 1949, *p.* 687) supplementing the 'dahir' of July 13, 1914, containing measures for protecting domestic animals against contagious disease, add Tularemia to the list of contagious diseases.

By an Order of the Vizir of April 19, 1949 (*ibidem*, p. 687) veterinary police measures have been taken against this disease. The importation into the French zone of the Sheriffian Empire of rodents (rabbits, hares, etc.) living or dead, is strictly forbidden ; exceptions may be authorized by the Chief of the Stock-Breeding Service, on presentation of an application accompanied by a statement of reasons, and by a certificate of the veterinary authorities of the place of origin declaring that no case of tularemia has been reported for more than 6 months within a boundary of at least 100 kilometres. When a case of tularemia occurs it entails the slaughter and burial after destruction of all the domestic rodents on the infected farm, and the destruction of the wild rodents under the supervision of the local authorities.

(*m*) Sericulture

ITALY

A Presidential Decree, N° 261, of April 9, 1949 (*G. U.* N° 124, *May* 31, 1949, *p.* 1416) provides executive measures for giving effect to the Legislative Decree, N° 662, of April 12, 1948, containing measures for encouraging silk-rearing in the 1947 season.

The Decree provides that until the grant in aid contemplated by art. 1 of the Legislative Decree of April 12, 1948, is fixed, the National Institute of Sericulture (*Ente nazionale serico*) is empowered to pay on behalf of the Government an amount not to exceed 80% of the definitive grant in aid which, under the provisions of the legislative decree may not exceed 100 lire per kg of fresh cocoons of the 1947 silk-year.

(*n*) Excise dues

ALGERIA

An Order of April 28, 1949 (*J. O. A. Part* I, N° 35, *May* 3, 1949, *p.* 492) establishes the factors to be taken into consideration in the case of certain kinds of crops in calculating the flat taxable profits for 1949 for the purposes of assessing the tax on farm profits.

A table annexed to the Order gives the coefficients to be applied to the taxable renting value, the flat profits per hectare, and the factors to be taken into consideration in calculating the flat taxable profits for 1949 for the purposes of the tax on farm profits, in the case of cereal crops, clover, lentils, geraniums, tobacco, flowers, meadows, commonage, woods, orchards, nurseries, vineyards, grape vines, etc.

An Order of May 3, 1949 (*J. O. A., Part. I*, N°. 42, *May* 27, 1949, *p.* 650), brings up to date the Order of December 31, 1946 on the application in Algeria of the single global tax on production. The sale and importation of a large number of the products of animal husbandry, agriculture and fisheries are exempted from the tax on production.

IV. - ECONOMIC AFFAIRS AND MARKETS

(*a*) Multipartite agreements : The International Wheat Agreement

FRANCE

The Act N° 49-895 of July 7, (*J. O.* N° 161, *July* 8, 1949, *p.* 6703) empowers the President of the Republic to ratify the International Wheat Agreement signed at Washington on March 23, 1949.

PORTUGAL

A Decree-Law N° 37-457 of June 27, 1949 (*D. d. G., Ist Series*, N° 138, *June* 27, 1949, *p.* 463) approved with a view to ratification, the International Wheat Agreement signed in Washington on March 23, 1949.

(*b*) Commercial treaties, economic agreements

BELGIUM

So as to promote commercial relations between the Belgo-Luxembourg Economic Union and Austria, an agreement on the exchange of commod-

ities between the said Union and Austria was signed at Vienna on June 11, 1948, and an additional Protocol was signed at Brussels on February 11, 1949 (*M. B. N°* 169, June 18, 1949, p. 5611).

Two quota lists, A and B, have been annexed to the Commercial Agreement. List A deals with exports from Austria to the Belgo-Luxembourg Union and includes among others the following products : timber, scythes and sickles, machinery, tractors, etc. List B deals with the exports from the Belgo-Luxembourg Union to Austria and includes quotas of the following commodities : fresh salt-water fish, salted or smoked herrings, potatoes, forage seed and nursery plants, chicory seeds. drugs and medicinal plants, palm-oil, fish preserves, chemical fertilizers, crude rubber, Congo timber, scoured wool, peeled flax, etc.

ITALY

A Presidential Decree N° 339 of March 17, 1949 (*G. U., N°* 150, *July* 4, 1949, *p.* 1730) implements the following agreements drawn up in Copenhagen between Italy and Denmark on June 18, 1948 : Commercial Agreement between Italy and Denmark ; additional Protocol to the Payment Agreement of March 2, 1946, between Italy and Denmark, and exchange of Notes.

(*c*) Foreign trade

BELGIUM

A Ministerial Order of May 15, 1949 (*M. B., N°* 141, *May* 21, 1949, p. 4426) amends the articles 5 and 9 of the Ministerial Order of March 18, 1948, dealing with the exportation, importation, and conservation of eggs. The amendments deal with the size of the crates and with the particulars that must be written on the crates containing exported eggs.

ALGERIA

In conformity with the Decree of November 30, 1944, fixing, in particular, the conditions on which foreign goods may be imported into France and the Overseas Territories, an Order of March 23, 1949, (*J.O.A. Part I*, N° 25, *March* 29,1949, *p.* 366), contains provisions relating to the distribution and sale of agricultural requisites which are blocked in the customs. These requisites, which on their arrival in Algeria were subject to the formality of being blocked in the customs, are assigned to the users by a decision of the Governor General. Unless they have received a written permit to dispose of them freely, the holders of these requisites are required to deliver them in conformity with the decisions designating the assignees.

FRANCE

Title II, Measures relating to Economic Activities, of the Act N° 49-874, of July 5, 1949 (*J. O, N°* 159, *July* 6, 1949, *p.* 6638), contains measures for the encouragement of foreign trade.

The Minister of Finance and Economic Affairs is empowered to give government guarantee to foreign trade transactions of a nature essential to the national economy. The government guarantee may be granted in full or in part to the French Insurance Company for Foreign Trade for its policies insuring against political and monetary risks, and against catastrophies, and exceptional commercial risks ; to banks and financial houses financing manufactures intended mainly for export ; to exporters themselves for certain transactions contemplated under article 53 of Act N° 48-1516 of September 26, 1948.

MOROCCO

An Order of the Vizir of February 8, 1949 (*B. O. N°* 1897, *March* 4, 1949, *p.* 266) amends the Order of the Vizir of September 1, 1944, on the enforcement of technical supervision of the manufacture and preparation of Moroccan exports. These amendments fix the rate of the fee for the inspection of the several controlled products submitted with a view to exporting them to the Agents of the Sheriff's Control and Export Office at a uniform percentage figure of 0.75 fr. *ad valorem.*

(*d*) Customs duties and duty free imports

FRANCE

Decree N° 49-822 of June 27, 1949 (*J. O., N°* 152, June 27 and 28, 1949 p. 6328) fixes the list of agricultural products of the Overseas Territories of the French Union that are exempted, when imported, from the tax on production.

Among the agricultural products exempted are live domestic animals, live and dead poultry, sea-fish, milk, butter, cheese of all kinds, eggs, vine-stocks, pulses, vegetables, citrus fruit, flour, oil-seeds or fruits, etc.

PORTUGAL

A Decree-Law N° 37: 444 of June 9, 1949 (*D. d. G. Series I, N°* 124, *June* 9, 1949, *p.* 405) amends the import duties on a large number of items, among others, wines, ornamental plants, lumber, wool, hides and skins, linseed oil, etc.

Another Decree Law N° 37 :445 of June 9, 1949 (*ibidem*, p. 409), raises to 60% the sur-charge on the import duties levied on many items. It also raises to 1.30 *escudos* per kg. the customs' sur-tax known as the ' National Safety ' tax, created by the Decrees of 1931 and 1933.

(e) Conditioning and technical inspection of export commodities

(i) *feedingstuffs.*

FRANCE

Decree N° 49-854 of June 28, 1949 (*J. O. N° 154 June 30, 1949, p. 6442*), contains provisions regulating the trade in feeds for livestock.

All packages containing a product intended to be used as feed for livestock and prepared for sale, must be labelled stating the nature of the product; its natural or industrial origin; the country of origin, should it be an imported product; the percentage of natural impurities and their nature; in the case of oil-cakes sold as such their minimum percentage content of raw proteins and fatty matter, and maximum percentage content of humidity and cellulose. If the oil-cake is sold in the form of meal, the degree of bolting must also be stated. If instead of simple products, *i. e.* those sold without any admixture, the products are composite ones obtained by mixing several simple products, the label must state in full (without using abreviations) the trade mark and name, which must contain the qualifying adjective 'composed', followed by a statement of the kind or kinds of animals for whom the feed is intended; the month and year in which it was prepared; the nature of the several contents, grouped in categories; the minimum content of raw proteins and fatty matter; the maximum percentages of cellulose, mineral salts, and humidity; etc.

All manufacturers or merchants are required to deliver to the purchaser an invoice with the required information. Orders issued by the Minister of Agriculture will specify the nature or content of harmful substances which make products intended for feeding livestock in general or one special kind of animal, unsuited for that purpose.

MOROCCO

An Order of the Director of Agriculture, Commerce and Forests of April 14, 1949 (*B.O. N° 1906, May 6, 1949, p. 564*) makes provision for the technical supervision of the exportation of fish-meal and fish waste to be used as feed for animals.

Shipments of the said products outside the French zone of the Sheriffian Empire must be accompanied by certificates of inspection delivered by the Sheriffian Supervision and Export Office, declaring that the products comply with the conditions required by the order; in default of which the Custom's officers will refuse to allow them to be exported.

Edible fish-meal for livestock and fish-waste are described as products obtained exclusively from the processing of fish and fish waste. The only products entitled to be called 'edible fish-meal (fatless, semi-fat, or fat) for livestock, are those possessing certain physical and chemical qualities established by the Order.

Other provisions contained in the Order relate to fish-waste, the supervision of its quality, the mode of packing, and the labelling of the packages.

(ii) *preserved foods.*

FRANCE

A Decree N° 49-646 of May 9, 1949 (*J. O. N° 112, May 11, 1949, p. 4601*) contains the public administration regulation for the application of the Decree of June 14, 1938, and requires a certificate known as the 'Export Supervision Certificate - for certain food preserves.

Apart from the application of the Decree of June 12, 1946, containing the public administration regulation for the application of the Act of August 1, 1905, in so far as the national quality mark is concerned, export of food preserves is only allowed in the case of products accompanied by a special document entitled 'the Export Supervision Certificate'. The conditions for the delivery of these certificates and the general conditions of quality and preparation to which food preserves must conform, are fixed by Orders drawn up jointly by the Minister of Agriculture and the Minister concerned, on the proposal of one or several technical committees appointed by the said Ministries.

Inspectors for the prevention of food adulteration together, in the case of fish-preserves, with the Agents of the Scientific and Technical Office on Sea Fisheries, are charged with the necessary work of inspection of the factories and packing-houses, during transportation, and at the export points, so as to make sure that preserves intended for export really correspoud to those for which the accompanyng certificate was issued. Custom's officers can themselves carry out such inspections at export points. A joint order issued by the Minister of Economic Affairs, the Minister of Agriculture, and the Minister concerned contains a list of the preserved foods to which the regulations laid down in the Decree apply.

(iii) *eggs.*

MOROCCO

An Order of the Director of Agriculture, Commerce, and Forests of March 10, 1949 (*B. O., N° 1899, March 18, 1949, p. 332*) contains new provisions relating to the technical supervision of the exportation of eggs, replacing previous provisions which are repealed.

The order defines the term 'eggs' reserved, without further particulars of the bird laying them, to hens' eggs. Shipment outside of the French zone of the Sheriffian Empire of eggs in shell, broken eggs frozen, and powdered eggs must be accompanied by a certificate of inspection delivered by the Sheriffian Supervision and Export Office,

declaring that the inspected goods comply with the conditions prescribed by the order, in default of which the Customs officers will refuse to let them be exported.

The Order contains provisions relating to the length of validity of the Inspection Certificates, the statement to be signed by anyone desirous of undertaking such export trade, the consent of the exporter, any change or surrender of trade marks, the quality of the eggs in shell exported, the categories of exportable eggs, the selection, grading, packing, marking of the crates, and marking of the date on which the eggs were shipped, etc.

(iv) *onions.*

ITALY

A Ministerial Decree of May 25, 1949 (*G.U. N°* 128, *June* 6, 1949, *p.* 1495) contains special technical rules regulating the exportation of onions shipped to the American Continents.

The national mark, regulated by the Decree-Law N° 2213 of December 20, 1937, must be attached to shipments of onions to the American Continents. Moreover the other provisions contained in the Decree laying down rules about the qualities required, the tares, the packing and wrapping, the labelling, shipping, inspection, delivery of the certificate of in spection, etc. must be complied with.

(v) *pears.*

ITALY

The Ministerial Decree of June 15, 1949, (*G. U. N°* 149, *July* 2, 1949, *p.* 1720) lays down special technical rules for the exportation of pears.

The national mark set up by the Decree-Law N° 2213 of December 20, 1937, is applied to pears for export. Shipments abroad must conform to the rules laid down in the Decree as regards quality, selection, grading, tares, packing and wrapping, the particulars to be written on the outside of each packet, shipment, inspection, etc.

(vi) *rice.*

ITALY

A Ministerial Decree of May 20, 1949 (*G. U. N°* 124, *May* 31, 1949, *p.* 1423) repeals and replaces the table fixing the official types and names of national cleaned rice for export abroad. The Table repealed and replaced had been approved by the Ministerial Decree of April 12, 1943.

(vii) *vinegar.*

MOROCCO

An Order of the Director of Agriculture, Commerce and Forests of March 5, 1949 (*B. O., N°.* 1898, *March* 11, 1949, *p.* 298) provides measures for the technical supervision of the exportation of vingars for direct consumption.

After consulting the Technical Committee on Wines, Alcoholic Drinks and Vinegars, of the Sheriffian Control Office, measures have been issued under the order relating to certificates of inspection, the preparation, manipulation, and authorized practices, to forbidden manipulations and practices, to the quality and description of vinegars, to containers, packing, and marking, etc.

Certificates of inspection relating to shipments outside the French zone of the Sheriffian Empire of vinegars for direct consumption must declare that the products inspected comply with the conditions required by the order, in default of which the Customs' officers will refuse to allow exportation. The Director of the Sheriffian Export Control Office is authorized to make — should he see fit — exceptions to the provisions of the Order taking into special account the regulations in force in the countries of destination.

(*f*) Preserved tomatoes, fruit and vegetables

MOROCCO

An Order of the Vizir of February 19, 1949 (*B. O., N°* 1897, *March* 4, 1949, *p.* 267) amends the Order of the Vizir of November 4, 1945, regulating the trade in tomatoes, fruit and vegetable and their preserves.

By this amendment the description 'tomato preserves' means that the concentrated product complies with the following requirements : (*a*) tomato *puré*, or *pulp*, or *sauce* : 7% of dry matter ; *preserves* : demi-reduced or semi-reduced 10% dry matter ; reduced or concentrated, 15% dry matter ; double concentrated or extract, 30% dry matter ; triple concentrated, 45% dry matter ; tomato paste, 55%, or super-concentrated, 55% dry matter. The percentage ratio in dry matter is always net of salt content.

Tomato preserves may not be put on sale under a description to which the dry matter content as stated above does not correspond.

(*g*) Price control and price fixing

(i) *slaughter animals and meat.*

FRANCE

An Order of May 25, 1949 (*J. O. N°* 125, *May* 26 1949, *p.* 5164) repeals some Orders relating to the price of sheep and goats, and mutton and kid meat. As from May 30, 1949, the price of sheep and goats delivered to butchers and of mutton and kid meats can be freely discussed as between buyers and sellers on the farm and at all the subsequent stages of marketing.

(ii) *preserved fish.*

ALGERIA

An Order of February 17, 1949, (*J. O. A., Part I, N° 15, February 22, 1949, p.* 206) reduces the maximum and minimum rates of '*marque brute*' in the trade in fish preserves containing oil. The maximum and minimum rates applicable as from February 22, 1949, in the trade in fish preserves containing oil, are reduced in the case of wholesalers to 9.6%, and in that of retailers to 15.4%

(iii) *lifting of price controls on imported goods.*

ALGERIA

An Order of June 3, 1949 (*J. O. A. Part I, N° 46, June 10, 1949, p.* 721) unblocks the prices of inported commodities. The prices of those contained in a list annexed to the Order may be freely discussed as between buyers and sellers when imported, and at all further stages of marketing.

Among the commodities listed are horses, horned cattle, sheep, goats and pigs, and their meat whether fresh or frozen, lard, salted cured, and smoked meat etc. fresh salt-water fish, or preserved in a fresh condition, manioc and sweet potatoes; fresh or dried citrus fruit; flour, meals, semolina, potato-flakes and meal for stock feeds, etc.

(iv) *fertilizers.*

BELGIUM

A Ministerial Order of June 23, 1949, (*M. B. N° 139, July 8,1949, p.* 6458) places nitrogenous and potassic fertilizers on the free price list. The same order repeals the Ministerial Orders of July 1, 1947, fixing the sales price of potassic fertilizers, and that of July 15, 1948, regulating the prices of nitrogenous fertilizers, and some other provisions.

(v) *edible oils.*

ALGERIA

An Order of February 9, 1949 (*J. O.A ., Part I, N° 12, February 11, 1949, p.* 163), amends the Order of December 24, 1948 fixing a single equalized price for edible oils of all descriptions.

Under this amendment the maximum and minimum sales prices of edible oils imported under quotas are fixed, as from February 7, 1949, on the basis of an equalization price of 20,490 fr. per quintal. The Order contains new provisions relating to the system of equalization, the stocks of oil held by the pools, the stocks of edible oils of all kinds held by the semi-wholesalers, etc.

(vi) *barley.*

ALGERIA

An Order of June 9, 1949 (*J. O. A., Part I, N° 49, June 21, 1949, p.* 759) fixes the sum to be paid to producers as an account on the price of their barley of the 1949 crop. While awaiting that the price of barley be definitely fixed, the growers will receive a net sum of 1,400 fr. per quintal as advance on this cereal if of good saleable quality, whatever be its specific weight, delivered to the warehouses of the pools.

(vii) *cheeses.*

BELGIUM

A Ministerial Order of May 17, 1949 (*M. B., N° 145, May 25, 1949, p.* 4557) places cheeses under the normal price regime.

The Ministerial Order of April 28, 1948, under which certain dairy products remained under the maximum price régime, is repealed in the case of cheeses. The provisions of the Ministerial Order of May 5, 1945, regulating the prices of agricultural, horticultural or imported food products, also ceases to be applicable to cheeses.

(viii) *tea.*

ALGERIA

An Order of February 17, 1949 (*J. O. A., Part I N° 15, February 22, 1949, p.* 208) amends the sales price of tea.

Under this Order the provisional cost price of tea imported in Algeria, is fixed as from February 22, 1949, at 371.34 fr. per kilogram. This price is not inclusive of the production tax, and is for tea packed at place of origin, delivered to the stores or depots of the Algerian Tea Importers Group (G. A. I. T. H. E. S.). The definitive cost price will be determined when the price of the last lot imported during 1948 has been fixed by a special decision.

The price at which the tea is sold by the G. A. I. T. H. E. S. to the wholesalers is fixed as follows, inclusive of the 7% importer's mark rate: to the wholesaler, liable for the tax on production, 399.30 fr. kg to the wholesaler not liable for the tax on production, 462.36 fr. per kilogram.

The sales price charged by the wholesalers is fixed at the uniform rate of 525.40 fr. per kg., inclusive of the 12% importer's mark rate and of the tax on production.

The sales price charged by retailers to consumers will be reckoned by applying an 18% limit rate on the *marque brute.*

(*h*) Butter

LUXEMBOURG

A Ministerial Order of May 31, 1949 (*M. L.*, *N°* 25, *June* 15, 1949, *p.* 569), amends the Ministerial Order of December 29, 1948, fixing the procedure for paying the government subsidies for butter.

These amendments have fixed the new amounts of the subsidy during the summer season, running from May 1 to September 30, 1949, taking into account the sales prices in force as fixed by the Price Office and the quality of the butter as shown by official expert tests.

(*i*) Potatoes

ALGERIA

An Order of June 11, 1949 (*J. O. A.*, *Part I*, *N°* 49, *June* 21, 1949, *p.* 759) makes exceptions to the provisions of Decree N° 47-1716 of September 4, 1947 regulating the importation into Algeria and the trade in potato-seeds.

As an exception to the rule, the sale of food potatoes sorted and perhaps graded, is allowed until August 15, 1949 so as to make up for the insufficiency of available supplies of selected potato cuttings or for reproduction. The words 'seed', 'cuttings' 'plantation' "reproduction" : multiplication", and any other words likely to give the impression that they are seed-potatoes, must in no case be used on the labels, packings, order-forms, sales contracts, invoices etc. The packages must have labels on which the words 'potatoes for consumption' must appear.

(*f*) Rice and paddy

MADAGASCAR

An Order of April 7, 1949, (*J. O. M.*, *N°*. 3333, *April* 9, 1949, *p.* 475) regulates dealings in rice and paddy during the 1949 season in the provinces of Tananariva and Tamatave.

Under the provisions of this Order producers are required to sell paddy to the consumers for family needs to the Liquidation Branch of the Rice Office, to persons collecting paddy introduced by the rice millers and approved by the Director of Economic Affairs, and lastly to the rice millers themselves. Moreover, the holders of stocks of rice or paddy, with the exception of producers and consumers, are required to make a return in conformity with the provisions of the Order of March 15, 1948 on the price system.

Within the boundaries of each province, rice and paddy may circulate freely but for shipment out of the province the preliminary consent of the Director of Economic Affairs is required.

To assure the provisioning of the population during the period between the old and the new rice season, a security reserve stock will be built up by purchasing ordinary paddy delivered to the rice-mills or in the warehouses of the rice-millers and cooperative stores. Purchase agreements and agreements regulating such sales and surrenders will be drawn up for this purpose with the rice-millers, the cooperative stores, and the Director of Economic Affairs, after consulting the Supervising Committee of the Rice Office.

V. - FORESTRY

ALGERIA

A Decision of March 23, 1949 (*J. O. A.*, *Part I*, *N°* 25, *March* 29, *p.* 366) winds up the Lumber Importing Service as from May 1, 1949.

As from that same date the Lumber Distribution Section is wound up under an Order of April 19, 1949 (*J. O. A.*, *Part I*, *N°* 34, *April* 29, 1949, *p.* 475). On that same date — May 1, 1949, — the sales-tax on forest products coming from Algerian forests, set up by the Order of December 19, 1944, is repealed.

FRANCE

An Order of May 10, 1949, (*J. O.*, *N°*. 114, *May* 13, 1949, *p.* 4739) sets up a Technical Tropical Forest Centre as a Government Company, having the quality of a trader entered on the Trade Register. The purpose of the Centre is to encourage in the Territories for which the Overseas France Ministry is responsible, the development of forest production, by making enquiries into the production, working, and utilization of tropical woods, forming and keeping posted up to date, a general documentation on the science and technique of the development of tropical forests and woods, etc.

Another Order of June 13, 1949 (*J. O. N°* 142, *June* 16, 1949, *p.* 5960), approves the Statutes of the Technical Tropical Forest Centre.

A third Order of June 20, 1949, (*J. O. N°* 157, *July* 3, 1949, *p.* 6527) amends article 6 of the above mentioned Order of May 10, 1949, dealing with the Board of Directors of the Centre.

A Decree N° 49-832 of June 27, 1949 (*J. O.*, *N°* 153, *June* 29, 1949, *p.* 6384) amends article 4 of the Act of April 28, 1922, dealing with protective forests.

In conformity with this amendment the classification of forests placed under the protective regime is made by an order of the Prefect if the proposed classification has not raised opposition. Should it be otherwise, the decision is taken by a Decree after consulting the State Council.

MOROCCO

An Order of the Director of the Division of Woods and Forests of December 9, 1948, (*B. O.*; *N°* 1889, *January* 7, 1949, *p.* 9) fixes the maximum rate of the bonus that may be grated to individuals who at their own expense have carried out works for reafforestation at 4,000 fr. per hectare. It should be noted that stands of wattle trees will not be held to be permanent groves of forest trees entitling to the bonus.

An Order of the Vizir of December 24, 1948 (*B. O. N°* 1892, *January* 28, 1949, *p.* 83) amends the Order of the Vizir of September 4, 1918 regulating the conditions for working, peddling, selling and exporting cork, tanning bark, acorns, charcoal, wood, wood-ash, resinous substances.

Under this amendment, anyone conveying to any place or putting on sale on a public market male-cork or cork for reproduction, tanning products (wood or rough or ground bark) native woods, acorns, carobs, charcoal, wood-ash, resinous forest products, and lichens, must hold a peddler's licence made out in his own name and with his address, stating the weight or volume of the products and their classification in the case of cork, their origin and destination. The aforesaid products, if peddled or placed on sale without a licence, are seized and sequestrated together with the wrappings containing them, and with the carts, teams and beasts of burden used for conveying them it any. More over, any exportation of these same products must be accompanied by a certificate of origin issued by the Service of Woods and Forests of the port of embarcation, after examining the peddler's licence which accompanied these products and on which their place of origin was stated.

VI. - GAME

FRANCE

An Order of May 7, 1949 (*J. O.*, *N°* 116, *May* 15 1949, *p.* 4784) contains provisions relating to the opening and closing of the hunting and shooting season 1949-50. The French territory is divided into two zones. In the first zone the hunting and shooting season opens on September 4, 1949 and closes on January 8, 1950, and in the second zone it opens on August 28, 1949 and closes on January 8, 1950. Other dates of opening are fixed for pheasant and grouse shooting, chamois hunting, etc. The shooting season for birds of passage closes at the general date, except for snipe which may be shot until March 31, 1950.

Other provisions deal with hunting with dogs, pigeon trapping with horizontal nets, etc.

VII. - FISHERY

(*a*) International conventions

BELGIUM

An arrangement between Belgium and Denmark for settling disputes arising at sea between Belgian and Danish fishermen outside territorial waters has been concluded by the exchange of letters, dated from Copenhagen, on December 30, 1948. (*M. B.*, *N°* 154, *June* 3, 1949, p. 5032).

Under this arrangement, any complaint entailing a claim for damages made by a fisherman of one or other country will be sent for a preliminary examination — in Belgium to a Committee of not less than two officials appointed by the Minister of Comunications ; in Denmark to a Committee likewise of not less than two officials appointed by the Minister of Fisheries. The official members of one or other of these Committees, as the case may be, will make their enquiry at the place where the charges brought by the plantifs can be more easily checked. The officials of the country to which the plaintiff belongs will get into touch with those of the other country, with a view to settling the dispute and coming to a friendly agree, ment on the amount of damages, with the consent of the parties concerned.

(*b*) Professional organization

ALGERIA

A Decree of April 4, 1949 (*J. O. A.*, *Part I*, *N°* 29, *April* 12, 1949, *p.* 415) ratifies a Decision N° 49-035 of the Algerian Assembly, reforming the trade Organization of sea fisheries in Algeria.

The Governor General is empowered to amend by Orders the trade organization of sea-fisheries in Algeria as set up by the Decree N° 46-449 of March 18, 1946, extending to Algeria the provisions of the order N° 45-1813 of August 14, 1945.

The Orders that the Governor General is empowered to make must have the purpose more especially of (1) reserving, subject to the supervision of the Superior Authority, the funds provided by trade taxes and dues to be used for professional, social, and technical works in behalf of the fishermen ; (2) for organization the election of members of the trade at the Regional Committee stage ; (3) for assuring by means of the Central Committee in the ports concerned the use of the funds collected in those ports ; and (4) for affiliating to a Central Interprofessional Committee the existing Central and Interprofessional Committees and assuring that it work on the most economical lines.

The trade in twist, nets, implements, and fishing tackle required for provisioning fishing boats and organizations is declared free, by an Order o

April 11, 1949 (*J. O. A., Part I, N° 30, April 15, 1949, p. 431*). At the same time the Orders of August 23, 1943, April 10, 1946, and April 19, 1948, relating to the distribution of twist, nets, and fishing tackle, are repealed.

(*c*) River Fishing

ITALY

A Ministerial Decree of January 14, 1949 (*G. U. N° 148, July 1, 1949, p. 1708*) contains provisions relating to the grant of public waters for purposes of pisciculture

Under the Decree applications for permission to carry out works for breeding fish in those stretches of water-courses or public fresh water basins, containing no fish of market value or few should, in conformity with the terms of art. 11 of the codified text of the Acts on fishing approved by R. Decree, N° 1604 of October 8, 1941, amended by the Decree-Law N° 1183 of April 11, 1938, have for their purpose the installation of icthyogenic incubators and the accompanying works required for restocking the waters, or else the formation of basins and pools to be used for breeding fish or other works relating to pisciculture.

MOROCCO

An Order of the Director of the Direction of Waters and Forests, of February 7, 1949 (*B. O. N° 1895, February 10, 1949, p. 201*) regulates the catching of small fresh waters fis in the French zone of the Sheriffian Empire.

Under this Order no one may engage in catching small fish for commercial purposes, *i. e.* no one is entitled to catch fish not mentioned in par. 2 of art. 3 of the 'dahir' of April 11, 1922, on river fishing, except by angling with a line, unless he is the holder of a fishing licence. Each licence only entitles the holder to engage in catching small fish in one special area (lot). Nevertheless special licences may be issued for certain water courses or stretches of water stating the tackle that may be used and the kind of fish that may be caught.

On each small fishing area (lot) the only tackle that may be used by licence holders are the cast-net, the square dipping-net, bow nets that do not come under the class of hoop-nets, trawl-line rods and line. The meshes of the nets must be those of the regular drag-nets as fixed by the Order of the Vizir of April 14, 1922, regulating the enforcement of the 'dahir' of April 11, 1922 on river fishing.

It should be noted that the use of the above tackle for catching shrimps is forbidden.

The Order also contains provisions relating to fishing as a sport, listing the streams and sheets of water containing salmon where anglers holding special licences may fish, subject to certain limitations.

An Order of the Vizir of March 5, 1949 (*B. O., N°. 1900, March 25, 1949, p. 368*) amends the Order of the Vizir of April 14, 1922, regulating the application of the 'dahir' of April 11, 1922 on fresh-water fishing.

The amendment requires that all fish, except minnows, blennies, atherines, carps, barbels, tench, rudd, perch, and white roach, that are below the sizes at which fish may be caught, must be thrown back into the water. The sizes allowed are: pike, 40 centimetres, shads and eels 30 cm., other fish, 20 cm. The length of the fish is measured from the tip of the head to the tip of the tail.

(*d*) Preserved fish fish meal and oils

ALGERIA

An Order of May 12, 1949, (*J. O. A., Part I, N° 39, May 17, 1949, p. 454*) places under supervised freedom semi-preserves of fish in oil packed in Algeria. The Algerian packers and canners may freely fix their prices. They are, however, required to fix an established price for sale to the consumer, on which deductions will be made to the several middlemen who take part in the marketing circuit. They are also required to forward to the Direction of the Central Service of Supervision and Economic Enquiries, of the General Government of Algeria, within 20 days of the publication of the order, a return, in 5 copies, stating the nature and composition of the product, the several factors in its cost price, the conditions of sale and the prices at the different stages of marketing as on May 15, 1949. Should any changes be made, they should also be notified to the said Direction. Lastly, the packers and canners and the dealers are not authorized to charge prices higher than those stated in the return forwarded to the Direction of the Central Service of Supervision.

Annother Order of May 12, 1949 (*Ibidem, p. 544*) completes the list of coefficients printed in art. 2 of the order N° 48-166 of March 30, 1948, relating to the sales price of sardines and sardelles packed in oil, or in oil and tomato sauce, in Algeria.

MOROCCO

After consulting the Technical Committee on fish-waste, meals and oils, an Order of the Director of Agriculture, Commerce, and Forests of January 12, 1949 (*B. O., N° 1891, January 21, 1949, p. 63*) contains measures relating to the technical supervision of the manufacture, packing and exportation of these products. The Customs' Officials will refuse to allow the export from the French zone of the Sheriffian Empire of pure fish oils, sulphonated fish oils and fish fats that do not comply with the conditions laid down by the Order.

Pure fish oils are classed as light oils and dark oils. The Order lays down the physical and chemical characteristics of each type. The Order also lays down the characteristics of sulphonated fish oils and fish fats.

Not less than seven days before each shipment, the exporter must send in an application to the Sheriffian Supervision and Export Office, for the purpose of having the quality checked. The Agents of the Sheriffian Supervision and Export Office check the accuracy of the application, take the samples required for analysing the product, and then seal the casks and drums forming the lot to be exported, if it be not already warehoused within the precincts of the customs' house.

The containers in which the oils and other products are packed must be clean, not have contained any substances that might injure the quality of the exported goods. The containers must be indelibly marked in visible letters with the following particulars, either in French or in the language of the importing country: (1) the name or trademark of exporter; (2) the nature of the product and its quality as stated in one or other of the following descriptions: pure fish-oil, light; pure fish-oil, dark; sulphonated fish-oil; fish fats; (3) net weight; (4) the statement 'produced in French Morocco' (5) the mark of the Sheriffian Supervision and Export Office.

VIII. - RURAL WELFARE

(*a*) Holidays with pay

FRANCE

Act N° 49-760 of June 9, 1949 (*J. O.*, *N°* 137, *June* 10, 1949, *p.* 5649) grants young workers in the agricultural and forestry occupations paid holidays of the same length as those enjoyed by those engaged in other occupations. A public administration regulation will have to be issued, within a month's time as from the date of the publication of the Act, laying down the special conditions for its enforcement.

(*b*) Cooperation

ALGERIA

An Order of April 14, 1949, (*J. O. A.*, *Part I*, *N°* 31, *April* 19, 1949, *p.* 434) lays down the conditions for the application of articles 50 and 51 of Decree 47-30 of January 8, 1947 on the legal status of agricultural cooperation in Algeria.

The order fixes the composition of the Algerian Council of Agricultural Co-peration and of the Committee for Approving Agricultural Cooperative Societies.

Special provisions relate to applications for approval made by agricultural co-perative societies and by Unions of Agricultural Co-operative Societies.

ITALY

The Act N° 100, of March 17, 1949 (*G. U.*, *N°* 80, *April* 1, 1949, *p.* 935) extends the duration of Cooperative Societies legally set up, whose term of life lapsed prior to the date when the Act came into force. The extension is valid for a period equal to that of their original duration, and in any case for a period of not less than two years as from the date when the Act came into force. The extension is not allowed when it is incompatible with the *ad hoc* clauses of the articles of association of the Society, or when the Society has really ceased to exist since the lapse of the term fixed for its duration.

Another Act N° 285, of May 8, 1949 (*G. U.*, *N°* 136, *June* 15, 1949, *p.* 1562) amends the Legislative Decree, N° 1577 of December 14, 1947, containing measures affecting cooperation.

The Act provides that special inspections are ordered by the Ministry of Labour and Social Insurances, and the relative costs are met by the Ministry. The results of the inspection must be submitted to the first meeting held by the Central Committee of Cooperative Societies. On their side, the Cooperative Societies are required to pay *pro rata* of the number of their members and of the paid-up capital a due to meet the cost of ordinary visits of inspection.

Another amendment alters the composition of the Central Committee on Cooperative Societies at the Ministry of Labour and Social Insurances. Lastly, the term for the reform of the articles of association of the co-operative societies is extended until December 31, 1949, in conformity with the new measures issued by the Legislative Decree N° 1577 of December 14, 1947.

(*a*) Rural electrification

MOROCCO

A 'dahir' of February 19, 1949 (*B. O.*, *N°* 1899, *March* 18, 1949, *p.* 303) contains measures relating to the works for rural elctrification in Morocco.

Rural electrification lines are laid with the financial participation of the users, formed in preferential agricultural syndical associations, on the initiative and by the care of the Sheriffian Government, or with budget appropriations made for that purpose, or with the resources supplied by a special account opened on the books of the Electric Power Corporation of Morocco, in conformity with the provisions of the 'dahir' of February 25, 1928, temporarily amending the combustion index ss foreseen in the contract for the concession of electric power in Morocco. The laying of the rural electrification lines is dependent on the financial contribution of the preferential agricultural syndical associations towards the first establish-

ment costs. The contribution made by these associations must be not less than 30% and not more than 90% of the real establishment costs.

The rural electrification lines will be operated on Government account, by administrators specially mandated by the Government for that purpose.

An Order of the Vizir of February 19, 1949 (*Ibidem, p.* 323) contains the measures to be taken for the application of the aforesaid 'dahir'.

Users desirous of benefitting by the provisions of the 'dahir' are required to form provileged agricultural syndical associations, under the conditions set forth in the 'dahir' of June 15, 1924 on agricultural syndical associations and the subsequent texts.

(*d*) Rural community centres

ALGERIA

An Order of February 10, 1949, (*J. O. A., Part I, N°* 14, *February* 18, 1949, *p.* 187) amends the composition of the Algerian Committee on Rural Centres (*Foyers ruraux*) set up by the order of December 27, 1946.

Another order of 10 February 1949 (*Ibidem, p.* 188) amends the composition of the Departmental Committees of the Rural Centres set up by the order of April 10, 1947, establishing a Rural Centre Committee in the chief town of each department.

(*e*) Home industries

SWITZERLAND

A Federal Order of February 12, 1949 (*R. L. F. N°* 27, *June* 30, 1949, *p.* 543) contains provisions for encouraging work in the home. Such work is encouraged by the Confederation when it is of social importance or is useful to the Country, and especially when it is of a kind that helps to improve the living conditions of the mountain populations. The Confederation gives additional aid when the Cantons and private institutions are unable to meet the expense of the work of encouragement. The Confederation may take general measures consisting more especially in giving advice to the parties concerned, coordinating individual efforts, and setting up suitable bodies. Within the limits of available funds the Confederation may also make grants in aid, or facilitate the concession of loans.

Another Order of June 28, 1949 (*Ibidem, p.* 446) contains the regulations for implementing the aforesaid Federal Order.

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